NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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JOEL NOURSE, PROPRIETOR. OFFICE,...34 MERCHANTS ROW. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS.

CALENDAR FOR MAY.

"When rosy May comes in wi' flowers,
To deck her gay, green spreading bowers,
Then busy, busy are her hours—
The gardener wi' his paidle.
The crystal waters gently fa',
The merry birds are lovers a',
The scented breezes round him blow—
The gardener wi' his paidle."—*Burns.*

MAY is more celebrated in song than any other month in the year — but it must have been a May different from ours, that inspired the poet in some of his attractive strains.

The Spectator says—"A celebrated French novelist in opposition to those who begin their romances with the flowery season of the year, enters on his story thus:—

"'In the gloomy month of November, when the people of England hang and drown themselves, a disconsolate lover walked out in the fields,'" &c.

The reason why the writer commenced in this way is quite obvious. He had a *disconsolate* lover to dispose of—a lover who, for aught we know, was at that very moment walking out in search of a place wherein to drown himself, *a l'Anglaise.*

Had he begun it thus—"In the beautiful month of May, when all nature was rejoicing—when birds were singing in every tree, and flowers were blooming in every nook," &c., &c., poetic truth would have required, not the introduction of one solitary lover on suicidal thought intent, but a *pair* of lovers "sitting on a mossy bank," looking unutterable things at each other.

Philosophize as we may, the weather does have a great influence over the spirits of the wisest of us, and we cannot help sympathizing with her varying moods. In the case of the "lover" aforesaid, we would hazard a guess that the lady dismissed him in an equinoctial storm, and that if he contrived to live through the winter, they made it all up, and were married the following May, with all the orange flowers and "honiton" suitable to the occasion!

Heaven's sunshine dissipates "vapors" of more than one kind, and "Melancholy often conveys herself to us in an easterly wind."

Geologists tell us that when the earth emerged from chaos, there was a period in which nothing but enormous lizards perambulated its surface, and that it took some time to fit it up for the residence of human beings. We have often been reminded of this in looking out upon a world just waking from its winter nap—and as day after day, a man plods amphibiously along through mud, water and snow—a pair of long rubber boots beneath his feet, and an umbrella over his head, he may be supposed to have pretty vivid conceptions of those primitive settlers of the lizard tribe. But then came the dry land, the green grass, the birds, the flowers—verily, it is the old story of the garden of Eden over again!

"And the Lord God took the man and put him into the garden of Eden to dress and keep it."

We would not indulge in idle speculations, but may we not fairly infer from this passage, that husbandry, in some form, was his natural and original occupation? Is it not true, also, that the necessity for the three learned professions, as they are called, arises entirely from the sins and infirmities of mankind? The minister calls not the righteous, but sinners to repentance. It is the lawyer's business to heal dissensions occa-

sioned by the bad passions of men, and the physician treats diseases brought on by some violation of the laws of nature,—either in the parent or his ancestors. So of many trades and mechanical arts, it were easy to show that they are founded upon artificial wants; but we can hardly imagine a condition in which farming is not man's legitimate pursuit.

If Adam attended to the cultivation of the earth, what, meanwhile, was Eve's employment? We may infer what Milton thought about it, for he makes her thus lament the expulsion from Paradise—

"O flowers,
That will not in other climate grow,
My early visitation and my last
At even, which I bred up with tender hand,
From the first opening bud, and gave ye names,
Who now shall rear ye to the sun, or rank
Your tribes, and water from the ambrosial fount?"

Most ladies, like their mother Eve, love flowers by nature, though all do not like the care of them. It is, however, a taste capable of cultivation. We believe any woman who can have the time, and land enough and help enough to give her genius full scope, will soon enter into the matter with all the enthusiasm characteristic of the sex.

We find some excellent hints in "Rural Affairs," a little annual published at Albany, N. Y., by LUTHER TUCKER & SON, Editors of the *Country Gentleman*. "Two very distinct styles of arranging and planting ornamental grounds have been adopted. In the old-fashioned or *geometric* style, everything was arranged in straight lines, or occasional circles. Every care was taken in this style to avoid irregularity." This anecdote is subjoined. "The old gardener of Selkirk, who was very strongly imbued with this mania, when he shut up the thief in the summer-house for stealing the fruit, was compelled, for the sake of symmetry, to confine his own son in the summer-house opposite!"

Nature delights in curves, rather than angles. She puts a bank of violets here, a clump of pine trees there—a wild rose on one side the brook, and a clematis on the other.

There are few who have been blessed with homes, who cannot recall their early days with pleasure, and associate with them some spots especially dear. The influence of all such memories is pure and refining beyond estimation; how much more so when the memories come linked with beautiful scenes. The elm tree at the door, with a robin's nest on a swaying branch—the vine over the porch, the morning-glory trained about the window, and the flower-garden—yes, the flower-garden!—your little boy, or your young brothers, may go to the grave with heads as white as snow, but he will keep in his heart a daguerreotype of this beautiful home of long ago, and you in the midst as its presiding genius.

Years ago we knew of a flower-garden—we fear it was rather in the *geometric* style—but we have never seen one so graceful in our eyes since. The centre was a square—the four outside beds were triangles; the whole bordered with pinks, while year after year grew in the same places, peonies, marigolds, tulips, jonquils, lady's-delights, and a few other common flowers. Farther down the enclosure was a pear tree, and ranged about it an oblong square of fleur-de-lis.

A faint idea of the fine appearance of this last arrangement seems to have dawned upon somebody, for it received the name of "Old Maid's Row."

Ah, it is easy enough now to look back from the heights of modern improvements, and smile at the want of artistic skill exhibited in the garden we have described; but we are content it should remain an unaltered picture in our memory, which shall bring back to us a vision of the fair florists who tended it.

And you, madam, and you, sir,—have you not a similar picture in your memory? and for what price would you part with it? Perhaps it is all grown over with weeds now, and only a few stray flowers mark the spot, but you will see it as it was in other days, and you will see those whose names

"Have been carved for many a year
On the stone!"

For the New England Farmer

THE HYDRAULIC RAM.

MR. EDITOR:—I have been looking over the pages of your interesting and valuable journal, hoping I might find something from W. D. B., of Concord, in reference to the Hydraulic Ram he likes so well, and to which allusion was made by him in the November number of the *Farmer*. In the article referred to, he says, "I think so well of the ram, that I should be glad to give you a full article on the subject." It is this "full article" that I have been looking after. I desire to learn more about this machine, which overcomes the force of gravity, and makes water run up hill.

I should be glad to hear how his ram has wintered. So far as my knowledge extends, the opinion seems to prevail that the greatest trouble with these machines lies in their liability to freeze.

I have no doubt there are many readers of the *Farmer* who suffer much inconvenience, especially in winter, for want of a convenient supply of water for their stock. It is evident that where streams are handy, the hydraulic ram, if it will work, is just what is needed. I presume there are many, even among those that have good wells, and keep large stocks of cattle, who would be glad to avail themselves of this seemingly easy method of obtaining running water, when they become convinced that it is reliable, and that the cost of

the machine and expense of keeping in repair will not be so great but that it will pay.

If "W. D. B.," or others, who are posted on this subject, will let their light shine, they will oblige many readers of the *Farmer*. S. D. C.

Sunderland, Mass., 1859.

JARVIS' AND BAKER'S ISLAND GUANO.

In our advertising columns, the reader may find this guano offered for sale,—and we call attion to it in order to refer those persons who desire to use some specific fertilizer, to an article which we think may be used moderately with safety. There are thousands of farmers who would be glad to employ some manurial agents beside what they derive from the natural resources of the farm, if they could resort to them with confidence. In various particulars such agents may be *profitably* used.

From the results of an experiment on our own farm, and from analyses by different chemists, we are inclined to think that this guano may be used advantageously. It does not yield ammonia, but its principal ingredients are the *phosphates* and *sulphates* of lime, the articles which confer a lasting benefit on the soil, instead of stimulating and exhausting its properties.

We have been careful, as our readers well know, about recommending specific fertilizers for general use,—but we have no doubt that this guano is safe and valuable, used as an auxiliary to our common manures. Let each use it in small quantities, but dress liberally whatever ground is attempted to be gone over.

We shall take occasion to speak of it again.

For the New England Farmer.

BARLEY FOR HORSES.

In Portugal, and, I suppose, in the Peninsula, generally, barley is the principal food for horses and asses. Nowhere do these animals appear fatter and sleeker than in and about Lisbon. Gentlemen's horses, whether native to the country, or brought from England and Germany, as many of their carriage horses are, are the pride of their owners and grooms, and certainly seem extremely well cared for. Yet their food is nearly or quite all barley straw, and the grain served to them as oats are with us. The barley is threshed by being trodden out under the feet of oxen and horses, and is made as fine as the old straw from an under bed.

When upon the road the usual baiting is bread, coarse wheat bread—occasionally dipped in the cheap wine of the country.

The barley crop appears stout and heavy as it stands in the field; and yet the land is ill-manured and far from rich. I do not see anything to prevent as large crops on ordinary lands; and I do not know why animals here should not find it as nutritious and as palatable food as it is there. H.

West Lebanon, N. H.

FOLDING VINE PROTECTOR.

We give above the illustration of a new device to protect cucumber, melon, squash and other vines from the depredations usually made upon them by swarms of hungry bugs. It is simple, cheap, and we think must prove effectual. The inside hoops in the round one are rattan, and the outside ones are made of tough white ash. These are covered with gauze, with the meshes sufficiently small to prevent the entrance of the striped bug. The three upright pins are simple pieces of pine that may be whittled out in one minute; the upper end has a notch cut in it, while near the lower end a hole is bored, which is slipped upon the bottom screw, and the protector is set up.

The one at the left hand has four sticks, each sawed out lengthwise, so as to admit the gauze, and fastened at the top with bits of leather. The points of the sticks in this and the round one are thrust into the ground until the gauze touches the surface, when there is no room for the access of bugs.

While it appears to us that these protectors will be more effectual than anything we have before seen, intended for the purpose, they have some advantages not possessed by others. The first, is their *compactness when not in use*, as they may be "collapsed" instantly, and some one or two hundred packed into a flour barrel, headed up and put away for another year. There being gauze on the sides as well as the top, the air will have a free circulation among the plants, so that they may grow about as vigorously as they would were nothing about them. They are also light, yet strong, cheap, and convenient to handle, either in placing, or taking them from plants, and in packing them away.

These protectors were invented, and are manufactured by Mr. Caleb Bates, of Kingston, Mass., who has taken measure to secure a patent.

SEWING MACHINES IN ENGLAND.—Great excitement prevails at Stafford and Northampton, in England, in consequence of the introduction of sewing machines in the manufacture of boots and shoes. At a meeting in Stafford, attended by 2000 makers and binders, it was stated that 5000 persons had been thrown out of employment in Northampton, and 1000 in Stafford, by the introduction of machine-sewn tops, and a union was formed for resisting the innovation.

For the New England Farmer.

VARIETIES OF NEW APPLES.

In running my eye over the last edition of Downing on the Fruits and Fruit Trees of America, I was struck with the number of new varieties of the apple he had added to his list in ten years. Within a circle of twenty-five or thirty miles in diameter, near the centre of which I reside, I find twelve new kinds, which I will give, together with the place of their origin.

Garden Royal.....Sudbury.	Mother.....Bolton.
American Beauty.....Sterling.	Carter.....Leominster.
Fall Orange.....Holden.	Foundling.....Groton.
Hill's Favorite....Leominster.	Hunt's Russet.....Concord.
Magnolia.....Bolton.	Priest's Sweet....Leominster.
Washington Royal....Sterling.	Willis' Russet.....Sudbury.

Now I can speak of most of these apples from actual experience. I regard the Garden Royal as the most delicious early autumn apple that I know. The Foundling, in this neighborhood, is perhaps entitled to the second place. The Carter is an acquaintance, and a most agreeable one too, of fifty years standing, and, regarding it as both a cooking and a desert apple, has few equals and no superiors, from October to January, while the Mother, with those who know it well, ranks equally high during the same period. The two russets, Hunt's and Willis', are both deservedly favorites, which will be in season from January to May, and the Washington Royal, which Downing endorses on the authority of the *N. E. Farmer*, will carry us through till we can gather our apples fresh from the trees. The other kinds will probably afford us a variety, and perhaps an equally agreeable flavor, while the American Beauty and Priest's Sweet will furnish the baking pan from September to May.

This, I think, is very well for a little circle of thirty miles diameter, and yet I have eaten apples nearly or quite as good as these, in the same region, which had no name known to the producer.

If this district was carefully canvassed, I do not doubt that at least twelve more varieties of nearly, or quite equal excellence, would be brought to light. Who will be the explorer? Who will found an establishment for systematically testing our native fruits and disseminating those of real merit? Will not some of our horticultural associations make it an especial subject of their attention? Is it not a matter of much more interest to fruit-growers than the introduction of foreign varieties, or even those from the Middle and Western States?

HENRY LINCOLN.

Lancaster, Mass., March, 1859.

REMARKS.—An excellent article—please let us hear from you again on similar subjects. We think a more particular account from you, of these and other *home* varieties of apples, would be of essential service. Such particulars, for instance, as the habits of the tree, with regard to quickness of growth, form, soil adapted to it, time of fruiting, flavor, and keeping qualities of the fruit, &c. &c.

Notwithstanding the *Garden Royal* originated in about the centre of Middlesex County, and well deserves the reputation you give it, it cannot, probably, be found in one in ten of the gardens or orchards of the people.

The *Hunt Russet* is one of the surest bearers, and the fruit remarkable for its long-keeping qualities, as well as for its delicious flavor, yet it cannot be found in one-fourth of the orchards o the county. And these deficiencies exist, while the people are cultivating third and fourth-rate fruit that requires its own weight in sugar and spices to soften and make palatable its harshness.

It may be said that accounts of these good apples may be found in the books—so they are, thanks to those who have given them attention—but books are not scattered broadcast among the farmers, as are newspapers. So we hope our correspondent will amuse himself, and benefit others by giving us brief sketches of the apples that have originated on our own soil.

EIGHTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

The meeting of the *Legislative Agricultural Society*, last Monday evening, was well attended. The subject discussed was "*Drainage.*"

Dr. G. B. LORING, of Salem, occupied the Chair. In opening the discussion, he said that the process by which land might be relieved of its superfluous moisture was one of the most important to the agriculturist. It lay at the very foundation of the successful cultivation of the soil. He did not refer to large operations; but large tracts of land saturated by springs, or holding in their basins the drainage of the hills or the falling rains and snows, which did demand the attention of the farmer. These were to be found everywhere. Hardly a farm could be found in New England which did not contain many valuable acres where cultivation was a matter of great uncertainty, on account of the water with which they are chilled and drowned. Every farmer knew that a ditch properly cut through a swamp would drain it. Every farmer knew that surface water would escape by means of dead furrows and an open drain. But most farmers had seen their strongest soils fail in the production of cultivated crops, and their best grass lands invaded by rank and sour herbage, in spite of all their efforts to keep them warm and productive by means of fertilizers. They had, indeed, removed the water from the surface, but the poison lay deeper down, at the roots, dwarfing their crops and neutralizing their manures. The great object of thorough draining was to deliver farmers of this evil. There were lands where nature did this for them, and where the character of the subsoil and the location of the lands were such

that deep tillage was alone necessary to produce a profitable result for agricultural labors. But where these did not exist—where the soil rested on a bed of clay, or was deluged by springs—art was required to enable nature to perform her proper work. Almost any cold soil could be brought to a kindly condition by drainage. If farmers would furnish their crops with a fair chance to remunerate them for their labor, let them rid the soil of water. If they would avoid the effects of drought, by allowing the roots of their plants to penetrate the soil to a depth which drought could never reach, let them drain the water from the subsoil. If they would prevent their fields from freezing to death in winter, and cracking and parching beneath the summer's sun, they should give them proper consistency by rendering the subsoil light and porous. In order to be warm and fertile, and equable in its temperature, receptive of manure, and responsive to its influence, soils must be free from that superabundance of water which made it cold in winter—surface-dry in summer—hard, clammy and forbidding.

Dr. Loring believed one of the most valuable inventions for accomplishing this object to be *tile-draining*. He looked on Mr. SMITH, of Deanston, Stirlingshire, Scotland, who more than a quarter of a century ago demonstrated the benefits of this form of drainage, as the benefactor of the farmer. His system had reclaimed thousands of acres in his own country, and had been adopted by the most enterprising farmers in our own. Dr. L. also alluded to the efforts made by Mr. JOHNSON, of Seneca county, New York, who had laid more than forty miles of tiles on his farm, and had increased his crops one hundred fold, by proper under-draining. It was hardly worth while to discuss the comparative merits of the different modes of draining at the present day. Stone drains had had their day. Except under extraordinary circumstances, they were not so economical as tile drains, and in no case were they so effectual. Every man, it was reasonable to assume, who undertook thorough-drainage, had advanced far enough in agricultural science to avail himself of tiles, if they could be had within reasonable reach. Dr. Loring said he did not propose to explain their construction, or their mode of application, but simply give his own experience of the use of tiles. He had on his farm a finely located field of four and one-half acres, level, warm, convenient to his barn-yard, and in every way a tempting piece of soil to cultivate. For half a century, however, it had been a reproach to the science of farming. It rested on an impervious bed of clay, into which all the water from the surrounding hills, and from four and one-half acres of overhanging clouds, was sure to be caught. It had been drained for generations by a deep, unsightly, open ditch, and was laid out in beds, with dead furrows. Many a crop had been lost there; and farmers always said it was plowed either a day too early or a day too late. When Dr. L. took it, it had, he said, long been laid down to grass, and everywhere the nutritious grasses were being expelled by rushes and weeds. He cut about half a ton of hay per acre from it in the season of 1857. On the first day of December of that year, the season being propitious, he had the open ditch filled in above two rows of four-inch sole tiles, from three to five or six feet deep—a thousand feet in length—with a fall of about four inches per 100 feet. Into these main tiles, on each side, he inserted two-inch sole tiles at distances varying from 20 to 32 feet, with the same fall for the water. The drains were filled at once, and their operation commenced. All winter they continued to discharge water from the field; and at the opening of spring its cultivation was begun. Here and there between the lines of drain were hollows which the plow could not obliterate, and the water would stand for a short time in them. But the soil improved month by month, and yielded 60 bushels of corn from the acre. During last autumn it was thought best to add a few more drains, and while making them, the workmen exclaimed—"How brittle this clay is!" The water was gradually passing out of it. The field already showed the benefit of the expense put upon it. The snow melted rapidly upon it, and it was fast becoming suitable for root culture, for which it was designed the coming season. The cost of draining it had been about $45 per acre; and, Dr. L. said, were he disposed to drain another piece of land, he should adopt the very same method of doing it—with the exception of laying the two-inch lateral tiles 16 or 18 feet apart instead of 30 feet—as a stiff, tenacious clay demanded the lesser width. He could not too highly recommend the draining system to farmers at large, and would urge the encouragement of the system of thorough drainage, by all proper means, at the hands of our agricultural societies, and of the Commonwealth. As there were several gentlemen present who had studied drainage, and experimented as well as he, the Chairman would proceed to call upon them for their opinions as to its value.

Mr. B. V. FRENCH, of Braintree, was the first speaker called upon, and he stated his experience in draining in his usually familiar style—having first given a succinct history of the improvement, and commended the principle of encouragement offered to draining improvers by the English government and by private corporations. The general argument he used was in fa-

vor of thorough drainage on nearly all descriptions of soils, as furnishing the best and safest condition for every description of cultivation. Deepening the soil was of the highest advantage to crops—to show which fact, Mr. French mentioned that he was informed that the roots of corn had been traced 15 feet in the soil, clover roots 23 feet, and strawberries 4 feet. Were such conditions furnished trees as would enable them to throw out their roots without obstruction, there would be no more complaint of their being heaved out by frost in the spring. He commended drains 4 feet deep, and 30 feet apart, and such could be formed, tiled and filled for about $50 an acre, or less, according to circumstances. The remainder of Mr. French's remarks showed an extensive acquaintance with the subject, and an earnest desire to have draining more liberally followed up.

Mr. SANFORD HOWARD, of the *Cultivator*, gave a very interesting history of draining improvements made by Mr. Johnson, Seneca county, New York State, showing that they had been commenced under discouragement, and especially discouraging advice, but their consequence had been singularly profitable. These improvements had begun on a small scale at first, but subsequently had been somewhat extensive, and 31 instead of 15 bushels of wheat, per acre, had been the produce of drained lands, while the crops were less subject to parasitical diseases, and earlier brought to maturity. Besides, a good crop was always certain from drained land, when undrained soils would not furnish one worthy the cutting. The cost to Mr. Johnson of digging, laying the tiles, and filling, (including the price of tiles) was 28½ cts. per rod. The land was not what was called wet land. It had a clay subsoil, and was very apt to bake in summer, chill in winter, and heave in spring, which evils had been obviated by its drainage. While Mr. Howard believed in the general benefits of draining, there were lands, he thought, that would not remunerate the farmer for the labor and expense. He briefly alluded to the science of draining as followed in Scotland, stating that the improvement in Ayrshire had been equivalent to a doubling of the produce of the land. On the eastern coast of Scotland the land was somewhat different in character, and the profit had not been so great. From 2½ to 3 feet was the approved depth of drains, where experience had proved the question of what was the proper depth. The soil Mr. Howard would except from draining advantages, were those porous soils which rested on a 'oose subsoil, without any intervening impervious stratum, or hard pan.

Mr. FLINT, *Secretary to the Board of Agriculture*, was called on to speak of certain improvements on the farm at the State Reform School in the way of draining. He could not speak of expense, as the labor was done by boys. The land was wet, and subject to remain in a semi-flowed state. As to the results, little definite informatian could be given, as the improvement was only a year old; but, last spring, the land could be worked as early as any other part of the farm. It took several years before the full amount of draining benefit could be realized—hence the present impossibility of speaking of results in the case in question.

Mr. NOURSE, of Bangor, Me., drained a field in 1856, and last year he had 45 bushels of barley, per acre. One acre yielded 51 bushels. It was drained 4 rods apart, and the drains from 3 to 4½ feet deep. It was designed originally to cut drains between, but those already constructed had worked so well as to make this design probably unnecessary to be carried out. Mr. Nourse was of opinion that depth of drain compensated, in some degree, for width. He thought that, if a farmer had 200 acres of land, he would do better to sell one-half and spend the money on the other, and borrow beside, if necessary, and profit would yet accrue in a greater degree than if he cultivated 200 acres of undrained land. Mr. N. thought $35 as much per acre as draining would cost, and $20 per acre more than it might amount to in some places. He concluded by giving a very interesting and instructive view of the philosophy of draining, which he had learned from experience. He approved of the use of tiles, as in every respect preferable to stones; but the latter ought rather to be used, than improvement should be neglected.

Mr. J. W. BUCKMINSTER, of the *Ploughman*, was doubtful concerning this fancy style of tile-draining, and wished to know why it should supersede open drains? He also felt anxious to know where the profit of this underdraining lay; in particular, where drains should be made in order to be profitable, and where they would be useless?

Mr. SANFORD HOWARD answered the first question by stating that open drains, during showers, would carry away fertilizing matter laying on the surface, whereas, by the water being forced down to the drains, through the soil, the sediment was retained in it, and extra fertility would be the consequence. When in Scotland, he saw a man jamming clay into his drains in order that the water should get into them from underneath, and not flow over their tops to the outlet, or along the surface, carrying the manure with it.

Mr. BUCKMINSTER would content himself with a homœopathic dose of such fancy, costly drains,

as he deemed it, everything considered, the most likely to be safe to take. His question as to what soils should be excepted from drainage had not been answered.

Mr. LEANDER WETHERELL spoke in favor of draining; and recommended a "little farm well tilled" in preference to the rage for too much land, which was so common. His own experience showed him that drainage was the most profitable of all improvements—was in truth the parent of all that was successful in agriculture. He felt satisfied with the answer given to the question relative to open drains, but thought open ones better than none; and, in the case of cultivated forests, it was absolutely essential. He believed all lands would benefit by drainage—no matter what their character or position—provided drainage was possible; and Mr. Buckminster acknowledged this to be an answer to his second query.

Several other gentlemen spoke; principally in evidence of the profitableness of draining, and that it was no fanciful improvement, after which the meeting adjourned.

The question for next Monday evening will be, "*The best Breed of Horses, and the best modes of breeding with reference to the wants and the interests of New England Farming.*"

For the New England Farmer.

RIVER MEADOWS.

MR. BROWN:—I learn by a few of the last numbers of the *Farmer*, that an effort is being made to redeem some of the river meadows in this vicinity. This is a good move, and is what should have been done long ago. That these lands are the most valuable in the State, for farming purposes, there is no doubt. When we take into consideration their close proximity to some of the largest cities in New England, with large and populous towns all about them, and the soil being of such a nature, deep and mellow, without stones, and being composed largely of vegetable matter, thereby rendering them almost inexhaustible, and when we take into account the natural washings they receive from adjacent lands, &c., it seems too bad that they should be rendered almost worthless, merely to accommodate a few old mills that are but little profit to their owners or any body else.

In this town there is a small river which has its source in Hart Pond, and runs in a circuitous route through Carlisle, then back into Chelmsford, and empties into Concord river in Lowell, about one mile from its mouth. This stream is called River Meadow Brook, and may easily be found on the county maps. On this river there are two mills where lumber is sawed in the winter and spring, and grain ground at all times when it is wanted.

On the banks of this river are some of the best lands to look upon that the eye ever beheld; and they are as good as they look. The vegetable deposit of which this land is composed is of various depths. I have dug down seven feet, and found it there almost entirely vegetable matter. One of my neighbors told me he had dug down ten feet, and found it rich and mellow. Of the number of acres of this kind of land on this river, I do not know, but should judge from the mouth to the source of the river, as it runs, to be some ten miles, and the meadow on its banks to be about thirty rods wide.

Now, these mill-owners claim the right to flow this land at pleasure. I have before me the history of Chelmsford, and in this we get an idea of their right and privilege. The author of this book, without doubt, copied from the old records, and as some may have never seen the record by which the present owners claim their right, perhaps it may not be amiss to quote what the records say, as doubtless hundreds of others are similarly situated.

"FIRST SAW MILL.—*July* 3, 1656.—This year was granted to Samuel Adams, in consideration of his setting up a saw mill, 450 acres of land upon the south side of his meadow, called Brook Meadow, provided he supply the town with boards at three shillings per hundred, or saw one log for the providing and bringing of another to be ready to work the next March.

"FIRST CORN MILL.—To this were added a hundred acres in consideration of his erecting a corn mill, and to give him still further encouragement, they passed an order, that no other corn mill shall be erected for this town, provided the said Adams keep a sufficient mill and miller. In 1661 he obtained liberty to set flood-gates at Hart Pond to himself and his heirs forever."

Evidently, this was a wise arrangement at the time, but to say that it is so now, is the height of folly. Then, again, I have been told that it was not the custom to flow these meadows in the summer till after the crops were off.

The present owners of these privileges obtained their right by purchase, consequently no law or force should be brought to bear upon them without full and just compensation. Therefore, I have thought that if an arrangment could be made with the mill-owners on this and Concord River, and perhaps others, by which the gates should be raised on the first day of April and shut down on the first day of October in each year, it would be all that was necessary for the grass and cranberry crops. Then we could gather these crops without having them several times inundated, thereby rendering them almost worthless.

T. J. PINKHAM.

Chelmsford, Feb. 18, 1859.

NIGHT AIR.

During the months of September and October, throughout the United States, wherever there are chills, and fever and ague, intermittents, or the more deadly forms of fever, it is a pernicious, and even dangerous practice, to sleep with the outer doors and windows open; because miasm, marsh emanations, the product of decaying vegetation—all of which are different terms, expressing the same thing—is made so light by heat, that it ascends at once towards the upper portion of atmospheric space, and is not breathed during the heat of the day, but the cool nights of the fall of the year condense it, make it heavy, and

it settles on the ground, is breathed into the lungs, incorporated into the blood, and if in its concentrated form, as in certain localities near Rome, it causes sickness and death within a few hours. The plagues which devastated Eastern countries in earlier ages, were caused by the concentrated emanation from marshy localities, or districts of decaying vegetation; and the common observation of the higher class of people was, that those who occupied the upper stories, not even coming down stairs for market supplies, but drew them up by ropes attached to baskets, had entire immunity from disease, for two reasons, the higher the abode, the less compact is the deadly atmosphere; besides, the higher rooms in a house, in summer, are the warmer ones, and the miasm less concentrated. The lower rooms are colder, making the air more dense. So, by keeping all outer doors and windows closed, especially the lower ones, the building is less cool and comfortable, but it excludes the infectious air, while its warmth sends what enters through the crevices immediately to the ceilings of the rooms where it congregates, and is not breathed; hence is it that men who entered the bar-room and dining-saloons of the National Hotel, remaining but a few brief hours, were attacked with the National Hotel disease, while ladies who occupied upper rooms, where constant fires were burning, escaped attack, although remaining in the house for weeks at a time. It was for the same reason that Dr. Rush was accustomed to advise families in the summer time, not being able to leave the city, to cause their younger children, especially, to spend their time above stairs. We have spent a life-time ourselves in the West and extreme South, and know in our own person, and as to those who had firmness to follow our recommendation, that whole families will escape all the forms of fall fevers who will have bright fires kindled at sunrise and sunset in the family-room. But it is too plain a prescription to secure observance in more than one family in one thousand. After the third frost, and until the fall of the next year, it is an important means of health for persons to sleep with an outer door or window partly open, having the bed in such a position as to be protected from a draught of air. We advise that no person should go to work or take exercise in the morning on an empty stomach; but if it is stimulated to action by a cup of coffee, or a crust of bread, or apple, or orange, exercise can be taken, not only with impunity, but to high advantage in all chill and fever localities.—*Hall's Journal of Health.*

FLOWERS FOR ROCK WORK.

One of the most interesting sights in a garden, is what is called artificial rock work, where the plants, which we are accustomed to see growing wild in our pasture, are transferred from these localities to the garden, where they are planted around, and into the interstices of rocks. These appendages to the garden are not so common here as in the old country. In England may sometimes be seen a hundred or more varieties of ferns, of different forms and shades, in one rock-work.

In erecting rock work, it should not be built up to resemble a pile of loose stones, nor regular in its outline; the rocks must be large and rugged, of rude forms, the spaces between them may be filled in with small stones, and the paths around may be irregular. This ornament to the garden should be placed in a half-shady situation, as most of the plants used require moisture and partial shade. A few of those varieties best suited for this purpose are, the Blood Root, Early Anemone, Saxifraga Vernalis, Rock Geranium, Partridge Berry, Mitchella or Checkerberry, Linnea Borealis, Blue Houstonia, Epigea, or Ground Laurel, White and Yellow Dalibarda, Wood Anemone, Columbine, and the smaller species of ferns.

For the New England Farmer.

EXPERIMENTS IN RAISING OATS AND POTATOES.

MR. EDITOR:—Several of your readers have requested me to inform them of my method of raising the oats and potatoes, recently reported in your paper, through the columns of the *Farmer.*

The potato ground is dry loam, on which I raised corn the previous year. The ground for the corn was prepared as follows: I applied thirty loads of stable manure to the acre, plowed in, and ten loads of hog manure per acre, in the hill. In the fall I planted and harrowed the ground. Last spring I applied twenty loads of stable manure per acre, plowed in, then plowed and harrowed it again. Planted it with Danvers red potatoes; rows three feet apart, and the hills eighteen inches apart. Seed small, cut once, and two pieces in a hill. I planted twelve bushels on an acre. The first time hoeing, I plowed between the rows twice, also the cultivator twice. The second time hoeing, I plowed twice between the rows. Raised 505 bushels on one and one-half acres, good size and sound.

The oats were raised on ten acres green sward and three acres old ground. Soil, dry loam. Plowed in the fall eight inches deep, harrowed thoroughly in the spring before and after sowing, and rolled. When the oats were three inches high, applied 150 pounds of plaster to the acre —no manure. Seed 3½ bushels per acre. Raised 725 bushels. WILLIAM HANSON.

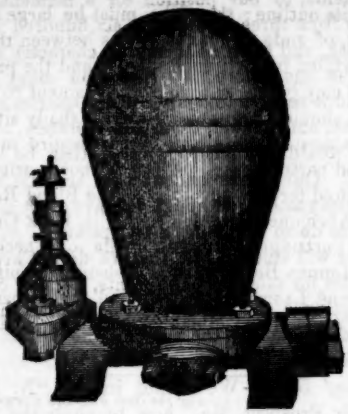
Barre, Vt., Feb. 22, 1859.

REMARKS.—A good example for us, gentlemen; 505 bushels of potatoes on 1½ acres of land, and nearly 56 bushels of oats per acre.

☞ The article from Mary E. C——y, *George Hill, N. H.*, upon the attractions of the "Mascoma Valley," is written with feeling and poetic imagination, and gives evidence of a highly cultivated taste. But as the scenic descriptions have been given before, it is not necessary to publish her article. She ought, however, to cultivate her talent for writing.

For the New England Farmer.

W. & B. DOUGLAS'S HYDRAULIC RAM.



For the purposes of Irrigating Lands, and Supplying Dwellings Barn-yards, Gardens, Factories, Villages, Engines, Railroad Stations, &c., with Running Water.

One of the first considerations in locating a house or barn is to select a site that water—pure, soft water, may be supplied in abundance at little cost. A commanding site—some dry hill, from which one may look over the tops of his neighbor's chimneys, proves an expensive place, always, for water. In how many homes that are elevated "the women folks" complain bitterly for the want of plenty of water. How poor it does make a man feel to be obliged to tackle up his team and take the scow and draw home a couple of barrels against washing-day.

I saw a selection made of some building-lots the past season that was most unfortunate. The land was gravelly, and so elevated that the wells must prove a heavy item in the cost of the home. Then, too, after a deep well has been dug and paid for, the pumping of the liberal quantity of water which an establishment requires, is the hardest work done on the farm.

It will do for wealthy people to build on hills. It is not economy for those who expect to earn their living, to build on elevated situations. Other considerations, besides the facility of getting water, should prevent.

But a great many people live in houses that others have builded, and must continue by pump or bucket, or some other way, to get their daily supply. It is my wish to suggest to some of your readers how they may have running water in their houses and lands, at an expense, perhaps, within the reach of all.

It is very true that a large portion of the farms of New England are destitute of springs and small brooks. But many have them. I know of hundreds where it is perfectly convenient to obtain a supply of water to drive an hydraulic ram. A well may be dug deep in a moist place, near the foot of a hill. This will drive a small ram and deliver a portion of water wherever you please. Then there are brooks very common. The water is not so desirable as that of springs, but still it will do for washing and for stock. Wherever you can raise a dam on a brook of two feet, there you may make a ram work to great advantage.

DESCRIPTION OF THE RAM.

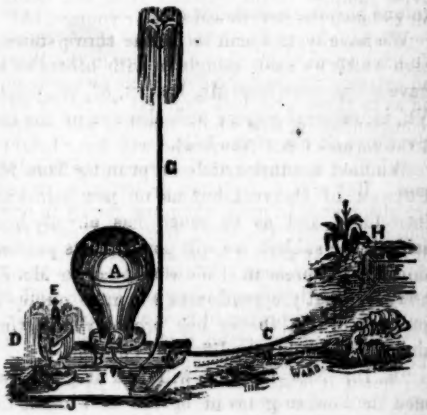
The cut at the head of this article gives a very good representation of the hydraulic ram. The air chamber in the centre is most prominent. This can be readily detached by turning off four screws. A valve is placed at the bottom of the air chamber, not seen in the engraving.

The valve enters the machine on the right. A convenient arrangement for attaching the drive pipe, and, also, the service pipe, is seen near the bottom of the ram.

The "puppet valve" is on the left. It is attached to the spindle, which rises and falls with the working of the machine.

HOW IT OPERATES.

The ram has two valves. One is called the puppet valve. This is so nicely balanced that it opens when the stream in the driving pipe is at rest. As soon as the stream has acquired its full velocity, the pressure on the valve, through which the water passes, is just sufficient to close it again. Now it is plain that the stream suddenly stopped in the driving pipe must press with great force against the second valve placed at the bottom of the air chamber. The valve opens, and a portion of the compressed water in the driving pipe is forced into the air chamber. The service pipe connects at the bottom of the air chamber and the elasticity of the air presses out a continuous stream. Here is the ram, with the pipes attached and in operation.



H, Spring or Brook; C, Drive or Supply Pipe from Brook to Ram; G, Discharge Pipe conveying Water to House or other point required for use; B, D, A, E, I, the Ram; J, the Plank or other foundation to which the Machine is secured for use.

THE POWER OF THE RAM.

To enable any person to make the calculation as to what fall would be sufficient to apply to the ram to raise a sufficient supply of water to his premises, for any ordinary distance of say 50 or 60 rods, it may be safely calculated that about one-seventh part of the water can be raised and discharged at an elevation above the ram, five times as high as the fall which is applied to the ram, or one-fourteenth part can be raised and discharged, say ten times as high as the fall applied, and so in that proportion as the fall or rise is varied. Thus if the ram be placed under a head or fall of five feet, of every seven gallons

drawn from the spring, one may be raised 25 feet, or half a gallon 50 feet. Or with 10 feet fall applied to the machine of every 14 gallons drawn from the spring, one gallon may be raised to the height of 100 feet above the machine, and so in like proportion, as the fall or rise is increased or diminished.

A year's experience with a hydraulic ram has enabled me to give further suggestions for which you may find room another week.

I have written the above without the slightest interest in the sale of the ram, and wholly to recommend a truly deserving invention.

Concord, Mass. W. D. B.

TO CORRESPONDENTS.

"A Subscriber," of Salem, will probably obtain the eggs he wants of *George Cruickshank*, of Whitinsville, Mass.

We have many favors from correspondents on hand, most of which will have a place. Some of them are more appropriate for another season of the year, and will be preserved—such, for instance, as two or three upon the subject of *topping and harvesting corn*, and one upon *making maple sugar*, which came when the season had nearly closed. We would inform "G. F. N." that we do not preserve manuscripts, whether we use them or not. The one to which he refers contained a pleasant anecdote, but matter more to our purpose crowded it out.

We have several articles on the turnip discussion which we shall mingle in with others as we have room—one from Mr. JOSLIN, of Waitsfield, Vt., in our next paper; and also one on the cultivation and use of the beet.

We have another article on pruning from Mr. PUTNAM, of Danvers, but as no new points are introduced, and as so much has already been said on the subject, we will postpone its publication for the present. We would say to Mr. P., however, that the gentleman whom he quotes in support of his theory has probably sometime since considerably modified his opinions.

"E. L.," New Bedford, will find it difficult to seed the land to grass he speaks of without the use of manure. Better manure a portion of it and seed it down. The orchard having been cultivated and manured for several years, may be laid to grass for two or three years—especially if sowed to clover—and not injure the trees. It should then be plowed and cultivated again.

Information by Letter.—A correspondent from L———e, Mass., wishes to put three acres into grapes, currants and gooseberries, and desires us to write him what it will cost per acre, and give such other information as will promote his enterprise. All this would afford us pleasure if it were in our power to comply with his request, especially as his letter is accompanied with a stamp for the return letter, and an expression of willingness to pay for all trouble. Let us call his particular attention, and that of other correspondents, to our position for a moment. We have from three hundred to six hundred letters a week, and many of them of a character similar to the one before us. Now, how many clerks would it require to answer their queries of this nature, and answer them considerately, so that they would not mislead, rather than be beneficial? Our correspondent must see that we can not reply to him, although we have every disposition to do so if it were in our power.

We will state to him that we do not keep the articles for sale which he wants, nor any others, excepting a few agricultural books, but he may find them among the persons who advertise in our columns.

Ring Bone.—We cannot inform "N. P. S., North Prospect, Me.," how to apply the medicine he speaks of. He must write to G. H. DADD, Vet. Surgeon, Boston.

CRANBERRY ON UPLAND.

We have thought that our Agricultural Societies have heretofore been rather premature in their recommendation of the upland culture of this fine fruit. As "one swallow does not make a summer," neither will one experiment justify us in commending this method. All know that the cranberry is natural to the meadow, and although the covering with water may be injurious at the time of flowering and setting of its fruit, still the flooding of the vines in winter, and the covering with litter or evergreens to protect the roots from a severe freezing, as is practised in the *upland* culture, will prevent this culture to any extent. In order to be remunerative, these beds or patches must be made on the meadow, or upon a springy soil. The owner of a considerable patch in Essex county recently stated that it would require *five* times the labor to keep the same amount of land well weeded out, devoted to cranberries, that it would to keep clear of weeds an equal extent in strawberries. This, with the whole process, from the first preparation of the land—the placing of meadow or swamp mud between the rows in mid-summer and the covering with evergreens in winter—must bring all to the conclusion that the upland culture of cranberries, so called, ought not to be recommended to our farmers.

We gave the matter a pretty thorough trial for several years, and became satisfied that the best way is to select a piece of land, either on the meadow, or its margin, where it its naturally moist, cover the grass entirely with sand or gravel, say to the depth of three or four inches, and set the vines in it, within six or eight inches of each other, and keep them entirely free from weeds.

For the New England Farmer.

TURNIPS ARE A PROFITABLE CROP.

MR. EDITOR:—Several conflicting accounts regarding the cultivation of rutabagas have lately appeared in your journal, and some farmers of experience, even, seem yet to be undecided, whether they are a profitable crop, or even will pay for raising. In your last No., February 12, your correspondent, Otis Brigham, asks the question, "When compared with other crops, are they worth raising?" My answer to that gentleman is, that like himself, I have raised them for the last 45 years, in quantities varying from one to twenty acres, each season, and find them, when compared with corn and other farm crops, decidedly the most profitable of any crop that I have cultivated in this country or in Europe, during that period. Mr. B. admits, that he raised 500 bushels, on half an acre of ground, last year, when and where nothing else could be raised.

That quantity exceeds, considerably, what I have ever been able to produce, even under the most favorable circumstances; still I do not doubt the statement, as I know that such quantities have been raised, and will be again.

Now, taking into consideration, as Mr. B. expresses himself, that they will grow where and when nothing else can be raised; I would simply ask the reason why they should not be worth raising; or in other words, why will they not pay? He admits that they are good food for cattle, &c., and yet appears to be in doubt with regard to them as a remunerating crop. Is Mr. B. aware, that his 500 bushels are now worth in Boston or New York market $165 wholesale? or at the rate of $330 per acre, which I should think is a pretty good return, and ought to satisfy any ordinary man on the subject in question. To go into detail, however, would occupy too much room in your valuable paper. Allow me, therefore, to state a few simple practical facts, regarding the cultivation and use of that valuable.

In the first place, a tolerable crop of bagas can be raised on ground too poor to produce almost anything else, and that with comparatively little manure, say 3 cwt. of guano, or the price of it in bone meal, per acre, which quantity would scarcely make any impression on an acre of corn, or potatoes, &c. &c., and fair crops are often raised after hay and early potatoes have been removed, the same season, as bagas can be planted successfully any time during the month of July, and even later' some seasons; and by leaving the tops on the ground, to be plowed down, immediately after the roots are removed, will overbalance any bad effects that their exhausting properties may have on the land for producing the subsequent crops.

A luxuriant crop of bagas will clean the ground better than any other hoed crop; and if properly treated, will effectually eradicate every vestige of *switch* or *witch grass*, that common curse to cultivators of the soil over the world, and the expense for labor will not exceed that of an acre of corn or potatoes. It is a well established fact, that an acre of good bagas, fed out to cattle, will produce more manure, and of better quality, than three acres of corn. It is also an old and well-established fact, that young growing cattle and swine will thrive, and grow faster, on turnips, than any other description of food; and every farmer who has cellar room to preserve them in winter, ought to produce a liberal quantity of them, every season, for that purpose. They are also good for producing beef and milk, although I certainly prefer beets for the latter purpose, notwithstanding it costs more than double the expense to raise them.

On the farm that I now cultivate, there are two acres of neglected, hard, gravelly land, that prior to last June had not seen a spadefull of manure, and had been cropped with rye for the last four years in succession preceding that date, by a former tenant, by which means it had become a real consolidated sward of *switch* or *witch grass*, and thought by many to be past redemption, for any kind of crop. In June last I made an attempt to break it up with a double team, but only succeeded in scratching the surface with plow and harrows, so as to change its color a little. After tormenting it with the harrow for awhile, I marked it off into rows three feet apart, manured in the hill the same as for cabbage, and planted the piece with rutabagas, finishing on the 3d July. All the manure I had for the two acres, was the scrapings of the dung-yard, which was deposited in the hills, in the usual way, at the rate of not more than two and a half cords per acre. The seed was dropped on the top of the manure and covered with the foot; the ground being too rough to admit of any speedier method of planting. The seed germinated quickly, and in less than three weeks, the piece was fit for thinning, and much in need of hoeing, and the final result was an excellent crop of the handsomest turnips that could be produced under any circumstances, notwithstanding the insurmountable and complicated difficulties with which their cultivation was beset; and the tops were so luxuriant, that they rotted, or choked out every vestige of switch grass, and the piece is now as clear of that obnoxious weed as any part of the farm. The produce per acre was 580 bushels, but if it be taken into account, that in consequence of the unparalleled wildness of the ground—the hills were far apart in many places—it may be safely computed, that at least a third more weight might have been produced, had the ground been under a better state of cultivation. This experiment corroborates, however, in a certain degree, what Mr. B. says about turnips growing when and where nothing else can be raised. On another piece, half an acre in extent, from which a tolerable crop of hay had just been removed, I planted rutabagas on the 19th of July, and had a fair crop, 320 bushels of good sized turnips. The piece received about two cords of sea-weed and dung-yard scrapings, which was harrowed in on the plow furrow, and the seed deposited by the machine in rows, 18 inches apart. The next and last piece appropriated to that crop last season, was half an acre of rather clayey sort of land, where a crop of onions had been cut off by the maggot. These were deposited by the sowing machine in rows 18 inches apart on the 3d of August, and as the ground had been heavily manured for the onions, it produced 402 bushels of handsome turnips after that late date; or at the rate of 804 bushels per acre.

In conclusion, I may here state, that in consequence of the barn that contained all my hay,

cattle and horses, &c. &c., being consumed by fire, with all its contents, last fall, I have been under the necessity, for the first time in my life, of keeping my cows and oxen exclusively on corn butts and turnips; and I do not see, but what they will compare favorably, and look as well in the meantime, as any around that have been feeding on English hay and grain, which confirms me still more in the faith, that rutabagas are worth raising, notwithstanding all that has been written and said against them lately.

THOMAS CRUICKSHANK.

Beverly Farms, Feb. 14, 1859.

For the New England Farmer.

FARMERS' CLUBS OR TOWN AGRICULTURAL SOCIETIES.

MR. EDITOR:—I learn from your interesing paper, that you are still wide-awake, and active, too, on the subject of Farmers' Clubs or Town Agricultural Societies. You have visited, it seems, several towns in Cheshire County, N. H., and endeavored to create a deeper interest in the subject of farming. Had you given previous notice, in your paper, of your intended visit, and of the object you had in view, we should, several of us, have been there to see and hear for ourselves, and you would probably have received an invitation to address our own town society, which has now been in existence and in successful operation a little more than a year. I say *in successful operation;* because, though we have done little more than hold discussions on subjects of the highest importance to us as farmers, yet our discussions have been listened to, and participated in, by a class of persons who never would have been benefited by the discussions of a county or State society. In fact, we have made up our minds that, if the people will not go to hear the discussions, then the discussions must be brought home to them. Our field of missionary labor is at home, and every farmer is expected to take a part in it, at least to give his opinion upon every subject under discussion. In this way, we compare notes with each other, and make a profitable exchange of our experience. Though there is a good degree of harmony existing among us, and a very general interest manifested in the attendance upon our meetings, yet we do not always agree upon every subject, because we are not all equally well-informed upon every subject, have not all enjoyed equal advantages for information, and our individual experiences have been different. Still, I would mention as the result of our last year's discussion on one topic, "the cutting and securing of the hay crop," that it was better done, and in better season, than in any previous year; and the crop of hay is worth more money. Now, if we can only make an equal improvement in some other branch of husbandry every year, we shall be doing very well; and some of us have faith to believe, that we shall even do better. Be this as it may, we are determined to do our best.

I have made the above few hasty remarks, not as an act of laudation upon our own humble efforts in forming a town society for the discussion of agricultural subjects, but to encourage similar efforts elsewhere. I regard these town associations as a kind of *normal* school for the education of the great mass of the people, in which the old and the young enjoy equal privileges, and may be each other's instructors, and helpers of each other's joy and labors; and where old fossil prejudices may be compelled to give way to clearer views and better practices on the subject of farming. These social gatherings will be the means of creating a more general and deeper interest in the subject, and of diffusing throughout the length and breadth of our land a greater taste for agricultural pursuits. These little town societies, though humble in their origin, are the fountains, from whence are to proceed all the streams of scientific, experimental and practical knowledge, which are to elevate the character and extend the influence of farmers. These are the fountains, I say, whose streams running through every vein and artery of the body-politic, are to give energy and respectability to our calling; and, without whose vivifying influence, the science of agriculture will continue to be greatly neglected, if not despised.

It is true, that farming is a humble, toilsome and laborious occupation. With many, the tiller of the soil is regarded somewhat in the character of a slave, as low-born and low-bred. This is the opinion of the frivolous and the ignorant, who still continue to depreciate and despise rural pursuits and pleasures. But it should be borne in mind that they equally depreciate and despise all labor, all industry, all enterprise and all effort. There is nothing in farming inconsistent with great intellectual and moral cultivation; and there is no pursuit that rewards so liberally with health, and wealth, and honor, as farming.

JOHN GOLDSBURY.

Warwick, Feb. 9, 1859.

SEA KALE.

Why is it there is such an aversion to adopt any new article for culture? How slow were most cultivators for years in raising the tomato, spinach or rhubarb. Some of these were cultivated in the gardens of the amateur some twenty years before they came into favor by our market raisers; the salsify is still hardly known as a marketable vegetable, while the sea kale can rarely be found even in the markets of our large cities. Farmers and gardeners are not, however, the only ones that are thus slow to receive valuable novelties. The medical faculty of Paris, it is said, proscribed as poisonous, the potato, one hundred years after that plant had raised millions of vigorous troops, who, under Marlboro', had again and again beaten the finest armies of France.

The sea kale is said, by Dr. CURTIS, to "centre within itself all the good qualities of the cabbage tribe, and as a purifier of the blood in the spring, it cannot be too highly recommended." This plant, when first introduced into cultivation in England, was said to be one of the most valuable acquisitions made to their culinary vegetables for fifty years previous.

The sea kale is of easy culture, either by seeds, slips, or pieces of the root; that from seed, however, is the most preferable. Any land in good heart will answer. The seed should be sown about two inches deep, the ground pressed down with the spade or hoe, and in about three weeks the plants will make their appearance; these should be thinned out to about one inch apart, and they want little attention other than to keep the weeds down.

At the commencement of winter, clear the plants of decayed leaves, bend over the tops carefully, and cover them with litter. The following spring the seedlings having made strong, healthy plants, should be transplanted into ridges two feet distant; they will then produce what is called the *crown*, or edible part at the top of each. It is a very lasting plant, producing as strong shoots or sprouts at eight or even ten years old as they did at four. The sea kale being a maratime plant, a slight dressing of salt to the soil previous to setting them out, will greatly benefit their growth. This vegetable is cooked in the manner of spinach and other greens.

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

There is probably no branch of Natural Science that has enlisted so many ardent admirers as Ornithology. The readers of the *Farmer* are no doubt aware of the enthusiasm displayed by Wilson, Audubon and Nuttall. William Bartram, one of our earliest naturalists, was a great lover of our feathered tribes. He remarks, "birds are, in general, social and benevolent creatures, intelligent, ingenious, volatile, active beings." J. P. Girard, the author of the Birds of Long Island, says, "it his opinion that those who pass through life without stopping to admire the beauty, organization, melody or habits of birds, rob themselves of a very great share of the pleasures of existence. In spring when nature has recovered from the chilling blasts of winter, and again puts forth her rich foliage, what can be more delightful, than to listen to the rich melody of our songsters, robed in their nuptial plumage, perched on the branch of the rich magnolia, arranging their splendid attire with studied care, as if jealous the swelling buds would put forth blossoms that would rival them in beauty?" John Ray, the father of British Natural History, in his work entitled "The Wisdom of God manifested in the Works of Creation," published in London in 1727, remarks, when speaking of birds, "by their melodious accents they gratify our ears; by their beautiful shapes and colors they delight our eyes; being very ornamental to the world, and rendering the country where the hedges and woods are full of them, very pleasant and cheerly, which without them would be no less lonely and melancholy; not to mention the exercise, diversion and recreation which some of them give us." We are informed by Montaga, that the venerable Dr. Latham, a distinguished English ornithologist, when in his ninety-first year, was as delighted in seeing a specimen of a new bird, as a boy on finding his first bird's nest!

The eccentric English ornithologist, Charles Waterton, has given us an amusing account of the means employed by his instructors to counteract in his boyhood the growing passion for the study of birds. How poorly they succeeded in their endeavors to destroy his enthusiasm, may be learned from his autobiography, and the reading of his admirable "Third Series on Natural History," published in 1857 when in his seventy-sixth year. In his account of his life and adventures, he says, "when I was not quite eight years old, I had managed to climb upon the roof of an outhouse, and had got to a starling's nest under one of the slates. Had my foot slipped, I should have been in as bad a plight as was poor Ophelia in the willow tree, when the 'envious sliver broke.' The ancient housekeeper, mentioned in the account of the barn owl, had cast her rambling eye upon me; seeing the danger I was in, she went and fetched a piece of gingerbread, with which she lured me down, and she seized me as though I had been a malefactor. At nine years old, I was sent to school in the north of England, where literature had scarcely any effect upon me, although it was duly administered in large doses, by a very scientific hand; but I made vast proficiency in the art of finding birds' nests. It was judged necessary by the master of the school to repress this inordinate relish for ornithological architecture, which, in his estimation, could be productive of no good. Accordingly, the birch rod was brought to bear upon me when occasion offered; but the warm application of it, in lieu of effacing my ruling passion, did but tend to render it more distinct and clear. Thus are bright colors in crockery ware made permanent by the action of fire; thus is dough turned into crust by submitting it to the oven's heat."

To my mind, language used by modern naturalists, expressive of their great love for birds, appears tame when compared with the enthusiasm discovered by some of the old authors. The most enthusiastic language we remember to have read upon the importance, or rather pleasure, to be derived from the knowledge of birds, was recorded in a work originally written in High German, in a rollicking style, by Peter Kolben, in 1731, in his preface to the "Natural History of the Cape of Good Hope;" wherein he says, "the beauty, the variety and music of the feathered nations are enchanting delights; and their instincts and habits often nobly instructive and amusing. I cannot help adding a reflection or two more here with regard to the feathered world, those beautiful, merry nations, which seem designed by Heaven as a kind of soothers and softeners of the chagrin and melancholy of human life, and a sort of counterbalance for the dull, the sour and the gloomy parts of the animal creation. What eye is not struck with those lovely nations of singers! What ear is not ravished with the charms of their melody! We say, after the French, that he who has no taste for music, has no soul. I must confess, I think he has a very strange one, or that it is hampered under

a strange sort of organization, who is not sensible to the melody of the feathered nations; and can people have a relish for the music of those beautiful warblers, and not a curiosity to look into their history; not a desire to know their make, their instincts and their economy; the knowledge of which is both profitable and entertaining? The variety of their abodes, habits and instincts, their various make, music and embellishments, are matters of the most delightful amusement. Nor are the preying, the mute or the unmusical part of them unprovided with matter of very noble and very useful contemplation." What writer in modern times, has so earnestly and enthusiastically set forth the claims of birds upon our attention, as did this old author, more than a century and a quarter ago?

Danversport, Feb. 3, 1859.

NINTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

The attendance at the Legislative Agricultural Society's weekly meeting, on Monday evening last, was not so large as is usual. The subject for discussion was—"*Horses: the best method of breeding, with a view to the special interest of New England farmers.*"

Mr. SANFORD HOWARD, of the *Cultivator*, presided. In opening the discussion, he stated that it had been arranged that the question as to breed should be confined to the purposes of the immediate locality. But no single kind of horses could be recommended to breeders in this locality, as three kinds were prominently required among us—the heavy cart horse, the coach horse and the roadster. The heavy draft horse, owing somewhat to the disqualification of soil in this Commonwealth, could be more profitably bred in a more southern and western situation. The draft horses, in this country, he might remark, were not so strong or perfect as the Clyclesdale breed in Scotland, and the Suffolk Punches of England. The latter were much hardier and stouter, and less liable to leg ailments. The coach horse, also, could not be profitably bred in this section. With the roadster, however, it was different. Our Morgans, especially those with a dash of the Black Hawk blood, were superior to any that could be found in Europe.

With regard to breeding, a standard of merit should first be fixed; and if material was not to be found which would come up to that ideal standard, here or elsewhere, the improvement would have to go on with what material we had on hand. The roadster should never be bred from the race horse, as the properties of the common roadster and the racer were very different. The hunter, which was a cross with the racer, in mechanical conformation, was not adapted to the uses to which the common roadster was put. The special point of value in the hunter was a great power in the hind legs, which enabled him to take extraordinary leaps; whereas the qualities of the trotter, to be perfect, demanded a proper and equal distribution of muscular power over the whole body of the animal. Mr. H. read several authorities to prove his position, and to show that a racing animal, or crosses from such, in equal properties of blood, would never make trotters. The mode of breeding adopted—according to Lawrence, and the author of "British Rural Sports" — with the greater success, was the coupling of the hackney mare and stallion, both of which have been bred as roadsters. These authorities, however, gave all the praise to American trotting horses—as being so greatly superior to all similar descriptions to be found in Europe as to be considered nonpareil. Further, they upheld that the less racing found in a roadster the better. Englishmen advocated bringing their breeding stock from America; and absolutely laughed in their sleeves at the idea of Americans going to England for animals to improve their roadster stock. This was to be looked on as a very high compliment, and showed decidedly that we had all the materials of improvement among ourselves. There had been no cross of the English Norfolk roadsters with the racer, during the past twenty years, and none was certainly demanded here among us, where perfection had so eminently excelled that arrived at in England. Mr. Howard combatted the idea that the importation of thorough-bred blood into our breed of roadsters would give greater uniformity in symmetry and color. The racer was made up of a medley of bloods, many of them very different in the representation of physical characteristics; and such assurance as had been argued in favor of racer blood could not be relied on. The properties of the racer were peculiar to the animal, and were of no value whatever if imparted to animals designed for different purposes; therefore let us cultivate our own breed of roadsters, as we have them among us.

Dr. WOOD, of Boston, was called on to speak, and stated that he was not of the belief that racer blood was an improper element to impart to the roadster. Experience had said so. In 1791 old *Messenger* was imported into N. Y., and his blood is generally diffused there among the best trotting stock. From that horse came *Lady Suffolk*, *Trustee*, *Hector*, *Ajax*, *Celeste*, and a great number of others; and many other noble animals came directly from racing blood—among them the late *Black Hawk*, which came from a thorough-bred mare brought into this State from Canada. It was, therefore, plain that the racing blood was an important element in our best roadster stock. The very best the coun-

try can boast of came from a three-fourth thorough-bred Hambletonian mare.

The PRESIDENT had not denied the fact that a trifle of thorough-bred blood was a good element in a roadster; and the previous speaker would recollect that the Messenger horse had the repute of having vulgar blood in him.

Mr. FAY, of Boston, from his own experience, had evidence that corroborated what had been said by Dr. Wood; and that gentleman quoted the unsurpassed feats of Trustee in proof that there was no stock more hardy and capable of endurance than the thorough-bred.

Dr. LORING, of Salem, thought the discussion had taken a course foreign to the original intention. Farmers did not wish to breed cart horses, or trotting horses, but good, substantial, useful animals, that could be used for general purposes. Such breed we had here in New England, weighing from 900 to 1050 lbs., hardy, well made, capable of great endurance, fair drivers, and patient under fatigue and hardship. They were very valuable to the farmer, although they might not be exactly alike in all parts where they were found. Out of the farms, the plows and furrows, this stock had been taken, and had performed greater feats than had been done by any other description of horses. There was, then, no use in going back to the old Messengers, Trustees, Abdallahs and Justin Morgans. They were the parents of our present famed stock, but they were not fast themselves. They produced progenies of great endurance, not speed, for the speed had been engrafted on the stock since, and that speed had been frequently remarkable, as records were quoted to show. The Morgans were indeed remarkable—more so than any other kind, and they were not thorough-breds. The author of a late work on the horse did not recommend the use of Morgan stallions, because they were not thorough-bred! The history of horses produced by thorough-breds, did not show such trotting feats as those got by the Morgans. Why then should racer blood be infused into our stock? We did not want our horses to run; they did not want to run, as it was, but took to trotting naturally, as they had been bred for that object. Moreover, the Morgans were adapted for all general purposes, and that was more than the racers were. Take one of your thorough-breds from the plow, and ride him to market, and what would he be like at the end of the journey? What experiments had been made with racer blood, had been failures here, for the produce had neither symmetry or substantiality about them. We certainly had among us the best material out of which to breed good farm horses. We had done so, not by management, but by chance, as we had nothing but native material to work upon. Our horses were superior, too, to those of the districts where thorough-bred stallions were used. If a good roadster was to be found in Virginia and Maryland, he was sure to have northern blood in him. Instead of improving the breeds there, the racing blood made them a nuisance as roadsters. This was not encouraging to the friends of importing horses from England, to improve our own; on the contrary, it proved the policy of Englishmen coming here to purchase our stock for improvement. Her best breeders had acknowledged the superiority of our horses. One of the most eminent, declared that he had never seen such a horse in England, and that they could not raise such horses there. He further added that no where in the world could such horses be produced, as he had seen here in New England, in our own State—and they were not directly, but very remotely allied in blood to the racer.

Mr. WETHERELL, notwithstanding all that had been said, was of the belief that our stock of horses was very much indebted to thorough-bred blood, in similar measure as our cattle had been. He also thought that too much stress had been placed on speed among us, and that we had cultivated it at the expense of endurance. The same evil had appeared among the racing stock of New England. A special point of management—feeding—had also been much neglected, as well as the careful watering, training and general treatment. These things should be better attended to than they had been.

Mr. BUCKMINSTER, of the *Ploughman*, spoke next. He confined his remarks principally to the exposition of what he called the fallacious doctrine of breeding a horse to suit general purposes. No horse could be so adapted, unless he was treated cruelly, by being made to accomplish labor which he was not perfectly adapted to perform.

Dr. LORING denied that there was any special necessity for breeding for special purposes, as it was well known that horses could be found in the country doing the common farm work, which could be put to any labor on the road, the field or the street without cruelty, but would go into any description of labor to which a horse was physically adapted. Dr. L. commended the use of small horses to large mares; the horse not more than 16 hands high, symmetrical, compact, and above all things, well tempered. If the contrary was the rule, heavy bone and light muscle would be the result.

The PRESIDENT was of opinion that what nearest conformed to the Morgan type was the best model of a horse for general purposes. If he had not said so previously, he had meant to do so. He then announced that the question for next

Monday evening's meeting would be, "*The cultivation and management of Hay.*" Hon. JOHN W. PROCTOR, of Danvers, is expected to preside. The meeting then adjourned at a quarter past 9 o'clock.

For the New England Farmer.

REVIEW OF THE SEASON.

In No. 1 of the current volume of the *Farmer* is a "Review of the Season," by D. Buckland, in which he suggests the utility of similar statistics from other parts of the country. Believing such information may be serviceable to some, and interesting to many, I now respond to the call by extracting from my daily register.

We are situated in latitude 44° N., and nearly on the meridian of Washington. I keep my thermometer in the shade at the north side of the house, both summer and winter.

The 4th month was dry and warm. Plows were started as early as the 7th. The 12th, grass and grain looked quite green. I found several varieties of wild flowers in the woods the 18th. A heavy thunder shower on the morning of the 30th. Mean temperature 43.53°, which is 8.18° above the mean of that month of 1857, and 2.47° above the mean of Toronto for eighteen years.

The first half of the 5th month was dry, but a plenty of rain fell the last half. The wind blew from some easterly point, 17 days. Mean temperature, 52.16°, which is .63° above that of 1857, and 4.88° below that of 1855. Maximum height of mercury, 74°, minimum, 32°. Cherry and pear trees in bloom the 28th. Early apple trees began to bloom the last of the month.

6th month. The first half was cool and very wet; but little rain after the 13th, and we had some extremly hot weather. Mean temperature 69°,—8° above the mean of the same month of 1857, and 7° above that of 1855. It was also 8.16° above the mean at Toronto for 18 years. Apple trees in full bloom the 3d, but some trees near the Lake were white as late as the 16th. A fair quantity of blossoms, enough to produce a good crop, if a good proportion had matured. Max. height of mercury, 90° the 28th. Min. 45° the 1st. Mean of first 12 days, 67°; mean of last 12 days, 83¾°.

7th month. First ten days, hot and dry. Rain fell in ten days of the month, but the season for harvesting hay and grain was pretty good. Hay crop about an average. Wheat much damaged by weevils and rust. Many fields were not harvested. Mean temperature 70°,—2.13° below that of 1857. Max. height of mercury, 87°,—Min., 48°. Warmest day the 10th,—coldest the 12th. Difference in the mean of the two days, 23¼°.

The first half of the 8th month was very hot and dry. In the evening of the 18th, a sudden change in temperature occurred. Between 6 and 9 o'clock the mercury fell 17°; a further depression of 7° in the night made 24° in *eleven hours.* Overcoats and fires were comfortable several days, but fortunately no frost was seen in this region,—the earth having absorbed an extra amount of heat in the previous hot weather, had a surplus to impart to the cold air which came in contact with it. Mean temperature of the month, 68.77° or 1.64° above that of same month of the previous year. Max. height of mercury, 88° the 11th; min., 44° the 23d. An abundance of rain fell in the last five days of the month, doing considerable damage to crops on flat land.

The temperature of the 9th month was about the same as in the last two or three years. The mean for the month being 61.14°. Max. height of mercury, 85°; min., 32°. Rain fell in only 9 days, yet in large quantities, and the ground was very wet. First general frost the 23d.

Potato crop pretty good, though on clayey soil they rot badly; not much diseased on sandy land. Corn about an average,—some pieces very good. Fruit almost an entire failure. Buckwheat somewhat damaged by frost.

L. VARNEY.

Bloomfield, Prince Edward Co., C. W.

For the New England Farmer.

WHAT IS THE BEST SEASON FOR PRUNING OUR FRUIT TREES?

This question is constantly asked; our agricultural papers have articles weekly on this subject. The conflicting opinions which are there given, we apprehend are in consequence of a want of knowledge of the nature of the circulation of sap, as well as in the office of leaves. Nature teaches us in this matter in the grape vine; we all know, that if the lateral shoots of the vine are cut or injured in early spring *before* the expansion of the leaves, it will bleed; but few seem to be aware that, on the contrary, if we will but wait until these leaves are fully developed, this will not to any extent occur, for the leaves which are analogous to the lungs in animals, by a *beautiful economy* take up the sap; hence pruning should not be done before this period; the trees then are in their most vigorous growth, and the wounds will heal over better at this season. It is amusing to hear the different testimony of farmers on this matter of pruning—thus, a writer from North Danvers says: "I have *never* known an apple tree that was pruned in March or April to bleed." While another, writing from Marshfield, thus speaks—"In pruning in April or May, I have found it impossible, in some instances, to prevent the wounds then made from flowing sap—it would burst off paint, shellac, and everything I could apply. I have known it to continue to flow for *two, or even more years.*" The latter is the most astonishing to us, *if true.*

J. M. I.

For the New England Farmer.

CORN CULTURE.

How more than one hundred bushels of Indian corn was raised to the acre, in the State of Maine—the *northernmost* of all the States of the Union.

Mr. Willard, of Wilton, Franklin county, Me., says that in 1853, he grew fifty-five bushels, eight quarts, on half an acre, of merchantable shelled corn, fit for use. It was done after this manner; a piece of gravelly loam was selected, and finely plowed ten inches deep, and manured with six cords of stable manure, in best condition for use, one-half of which was spread and covered by the plow; the other half was placed in the hill.

An abundant supply of well-seasoned seed was dropped, and the surplus plants were thinned out so as to leave about one plant to each square foot of land. It was carefully cultivated, and kept entirely clear of grass and weeds. Potatoes, pumpkins or beans were among the corn, and none were wasted there.

I have never seen a more rational and satisfactory account of corn culture than this, and although I have heretofore been slow to believe that one hundred bushels of useable corn could be grown upon an acre, still, by the application of the same industry and fidelity that Mr. Willard applied, I believe that most of our farmers could double their crops. Let them begin by plowing as deeply and fertilizing and pulverizing as well, and with the blessing of Heaven, their crops will be as good. P.

South Danvers, March 4, 1859.

EXTRACTS AND REPLIES.

PLUM ON THE PEACH.

A writer in a recent *Cultivator*, signed "E. W.," says "that in visiting a Mr. Allen's nursery he learned a fact relative to plum trees worthy of the notice of our horticultural brethren. Near the house are several plum trees of some twenty years' growth, which were entirely free from warts or excrescences. Mr. A. imputed this *entirely* to the fact, that all his plum trees are on peach bottoms."

This is altogether new to me. Having a few years since cultivated this fruit to some extent, I had a good opportunity, with upwards of fifty distinct varieties, to have seen this; on the contrary, those varieties grafted on the peach root, viz., Bolmar's Washington and Prince's Imperial Gage, all being on this root, were greatly affected, so much so that those trees were the *first* we were obliged to cut down. I was troubled with these unsightly excrescences to such an extent as to render the growing of the plum out of the question, and at once discarded its further cultivation in my soil. J. M. I.

Salem, Mass., 1859.

WATER THROUGH LEAD PIPES.

I have repeatedly noticed in the papers accounts of fatal effects to persons, resulting from the use of water conveyed through lead pipes. Does lead water hurt farm stock? A neighbor whose cattle for many years had been watered at the barn through logs from a spring thirty rods distant; the logs getting leaky, he pushed a lead pipe through them, thereby saving much digging. Since that time, his cattle, with as good food and care, appear more lean and less thrifty, and do not shed their coats and look sleek so soon by more than a month after being turned to pasture. Cattle have died soon after swallowing paint, lead and oil, and is it not possible that lead and water may be hurtful to animals? What material is best to convey water through, to quench the thirst of man and beast? AN INQUIRER.

REMARKS.—We have no doubt that water impregnated with lead is hurtful to man and beast. Water is not injured by passing through logs, and where there is a constant stream, so as to keep the logs continually wet, they will last for many years. Conductors, bored, and ready to lay, are sold in this city; they will undoubtedly last many years, if kept all the time wet. Cement pipes are excellent, but must be kept from the frost.

BEES—CRITICISMS.

I see by the *Farmer* of Feb. 26th, that Mr. Kidder has given in his book a plate like Mr. Langstroth's—"The honored queen of a happy family." The subject is a beautiful one. It is a pity that in copying from Mr. L. he did not correct some errors. Both of them, (Messrs. L. & K.) have over-drawn the matter, it is not exactly true to nature. It is true a few bees will usually give the attention represented. But I never saw such eagerness—such devoted attention by so much of a crowd. It would hardly seem possible for her to move; and among the rest, a drone is making his way into the crowd (an occurrence not often seen,) anxious no doubt for a salute. Another error should have been avoided relative to the shape of the bee; the head is too small, and the body too large, &c.

St. Johnsville, N. Y. M. QUINBY.

FEEDING STOCK.

I have one hundred sheep, three horses and eight head of cattle, and am, like a good many of my neighbors, short of hay. Hay is now worth here $15 per ton, corn $1 and oats 50 cts. per bushel. Now I wish to know which is best, all things considered, to purchase hay, corn or oats at the foregoing prices.

If grain, how shall I feed it, and what quantity would be equal to a foddering of hay, say for one hundred sheep?

Will corn meal or oats, fed to ewes with lamb, be injurious? A SUBSCRIBER.

Woodstock, Vt., 1859.

REMARKS.—Situated as you are, we should purchase all three of the articles, hay, corn and oats, and feed them judiciously to all the stock. A moderate quantity of corn or oats fed to the ewes with lamb, will be beneficial to them.

GAS LIME.

Please give an article on gas lime, the soil it is adapted to, with its value as a fertilizer.

Hartford, 1859. SAMUEL MATHER.

REMARKS.—The refuse lime of gas works consists principally of a mixture of carbonate of lime, plaster, and other salts of lime containing sulphur. It may be used upon old mossy pastures, or sprinkled on the furrows in the spring with advantage; or, when greatly diluted, sprinkled on grass lands. As it does not contain much caustic lime, it may be mingled with barnyard manure in small quantities.

COMMITTEE OF PRODUCE.

It has seemed to me that in each of our agricultural societies, favored with the bounty of

the State, generally about $600 a year, there should be a committee of this character, whose duty it should be, by personal inspection, correspondence, or otherwise, to ascertain and digest a complete statement, in tabular form, in their respective precincts, and make returns of the same to the Secretary of the Board of Agriculture. Let such statements be made with such authority, from year to year, and brought together in the secretary's report, and they will, in a great measure, remunerate for the money expended in support of such societies. I forbear to enlarge, always bearing in mind the maxim, "A word to the wise is sufficient."

March, 1859.

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THE MANGOLD WURTZEL.

Please state the process of preparing the soil for a crop of mangolds, and where I can obtain the seed. T. W. SAWYER.

West Millbury, Ms., 1859.

REMARKS.—Plow and cultivate so as to make the soil quite fine. Manure well, broadcast, furrow out good wide and deep furrows, fill them with manure, and sprinkle salt over it, then turn two furrows upon this, one on each side, rake down, roll it, and sow the seed. Under such treatment you ought to get a thousand bushels per acre, if you tend them well. The seed can be had of Nourse & Co., 34 Merchants Row, Boston.

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ELECTRICITY.

I noticed in the *Farmer* remarks by "Electricity," in answer to questions made by "Non-Electricity," in reference to ventilation and electricity. Will "Electricity" answer the question,—"Why the electricity strikes a tree, or even the lightning rod standing in the open air, when the atmosphere and all the gases are reduced to an equilibrium? When this question is satisfactorily answered, I shall then be prepared to remove the cause and save the expense of protectors.

Derry, N. H. INQUIRER.

—

ACID SUGAR MAPLE SAP.

Will acid sugar maple sap affect paint or strike through it so as to taint the wood of the tub? What will cleanse vessels painted on the inside, so that they will not affect sap or water?

Ashfield, Feb., 1859. HENRY TAYLOR.

REMARKS.—Will some sugar-making friend reply?

—

A GOOD PIG.

Mr. JOHN R. WALKER, of this city, dressed a pig on the third of March, nine months old that day, which weighed alive 375 lbs.; dressed 320 lbs. It was quarter breed Suffolk. It was handsome, and had not been hurried any, but had lived on the usual pig food, corn meal principally, until within two months past, when some ground wheat has been added. I give this item, so that you will know that New Hampshire farmers are not much behind the times—in the *porcus* line, at any rate. ROCKINGHAM.

Portsmouth, N. H., March, 1859.

A FINE COLT.

I noticed a statement in the *Farmer* a few weeks since, with regard to a large colt that I own, that needs some correction.

The writer called him a *Morrell* colt, which in Vermont is equivalent to saying he was sired by the old Morrell, of Danville, Vt.

Justice to all concerned requires me to state that the colt was sired by the Morrell Champion now owned by William T. George and Henry Whicher, of Topsham and Newbury, Orange county, Vt.

The colt is now eighteen months old; color dark chestnut, height 16½ hands, and his weight in *ordinary* flesh is over one thousand pounds.

PERLEY ROBERTS.

Washington, Vt., Feb. 23, 1859.

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WHITE PINE SEED.

Will you be so kind as to inform me through the columns of your paper the best season for planting the pine seed, and likewise for gathering the cone? As I have some fifty acres plain land that I wish to plant with the same, this season. A SUBSCRIBER.

REMARKS.—Friend CUTTER, of Pelham, will please answer this.

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PUMPKIN AND SQUASH.

Can you, or any of your scientific correspondents, inform me of the chemical composition—organic and inorganic—of the pumpkin and squash? C. BLAISDELL.

West Needham, March, 1859.

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HOW MANY POUNDS OF MILK FOR A POUND OF CHEESE?

Can you, or any of your correspondents, tell how many pounds of new milk it takes to make a pound of merchantable cheese? ENQUIRER.

Lyndeboro', N. H., Feb., 1859.

For the New England Farmer.

PREMIUMS FOR SPEED OF HORSES.

MR. EDITOR:—I have just received the Report of the doings at the Annual Meeting of the State Board of Agriculture of Ohio. Among other votes passed at the meeting, were the following:—

"1. *Resolved*. That paying premiums by agricultural societies for speed of horses, simply as such, without due reference to qualifications for purposes of general utility, is a perversion of the original design."

"2. *Resolved*, That trials of such speed have a great tendency to divert attention from every thing else, and with what seems to be their inseparable accompaniments, are degenerating and demoralizing, and therefore we will not offer such premiums, and will discourage their being offered by county and district societies."

This opinion, thus forcibly expressed, is entitled to much respect. It comes from a great agricultural State, and where at the same time the breeding of horses enters into the occupation of farmers very largely.

Very truly yours, A FARMER.

For the New England Farmer.

PORTUGAL AGRICULTURE.

MR. EDITOR:—I observed in Portugal, what struck me as a peculiarity of the climate, that the ground seemed never exhausted. It has been cultivated in the same way near a thousand years, and still produces, for aught I know, as much now. The mode of culture is rude, and the quantity of manure applied very small. Little manure is made; cattle are not housed in winter; barns are hardly known except in connection with inns and in the towns. Ferns, brakes and leaves are collected in wet places, and flocks of goats folded upon them at night, sometimes, or the materials are drawn into the middle of the road for the travel to pass on them, and after about a year carted to the field. Such a thing as a heap of barn-yard manure I never saw there out of the cities. The merest sprinkling is put upon the land, and the surface barely smoothed over with a plow, not much better than a sharp stick. And yet pretty good wheat, really stout barley and tolerable Indian corn are grown every where. Indian corn is sown broadcast, and thinned to about one plant a foot square, with the hoe. The corn is perfectly ripened, though the ear is small. Potatoes yield plentifully, and are of excellent quality.

And so the land is tilled year after year, and century after century. The principal difference of the climate from our own is, that the seasons are reversed there. Summer is the winter of vegetation. All nature sleeps in summer; the earth dries up; every green thing withers.—With the autumn rains vegetation revives, and the earth looks green again. The barley and the wheat harvest is over before the drought comes on in June, and sometimes earlier. Indian corn and potatoes, by means of artificial irrigation, come forward at any time, in the south of Portugal. Green peas are in market every day in the year. The wonder to me is, how the fertility of the land is preserved under such a system of cultivation. H.

West Lebanon, N. H.

GRAFTING AND TRIMMING FRUIT TREES.

An experienced cultivator in Dutchess county, N. Y., writes as follows on these subjects:—

"Scions for grafting should be cut in February, which is the right season to insure their living and doing well; they should then be housed in a cellar until the time for inserting them arrives, which, with you, might be by the last week of April or the first of May, and during the latter month. They should be put only into healthy, vigorous branches, such as you would not care to remove from the tree, and thus you will have an artificial tree that will be ready for bearing in about three years.

By removing too many branches from a tree injury may be done. Careful attention should be given to this point in lopping the branches preparatory to grafting, in order that the sap may pass into the remaining branches and keep the tree healthy and growing. I give you these ideas, knowing that fruit trees are often injured by those who go about the country making it their business to set grafts in April and May, setting as many scions as they can, and getting pay for those that live, thus doing great damage to the trees.

Many farmers in our county have, I think, a wrong idea as to the time of pruning their apple trees, saying it is of little consequence when the tree is pruned, if it only needs pruning. This, I am ready to say, is a sad mistake, for at all seasons when the sap is down it is entirely wrong. The first or second week in June is the only fit season for pruning the apple tree. Then the sap is in full flow, and the wound made by cutting off a bough begins to heal and grow over immediately."

For the New England Farmer

LEGISLATION---LAND DRAINAGE COMPANIES.

BY HENRY F. FRENCH.

In the valuable treatise of Dr. Warder, of Cincinnati, recently published in New York, upon Hedges and Evergreens, an abstract is given of the statutes of most of our States upon the subject of fences, and we know of no other book in which so good an idea of the legislation on this subject can be so readily obtained.

By the statutes of Massachusetts, any person may erect and maintain a water-mill and dam to raise water for working it, upon and across any stream that is not navigable, provided he does not interfere with existing mills. Any person whose land is overflowed, may, on complaint, have a trial and a verdict of a jury, which may fix the height of the dam, decide whether it shall be left open any part of the year, and fix compensation, either annual or in gross, for the injury. All other remedies for such flowage are taken away, and thus the land of the owner may be converted into a mill-pond against his consent.

We find nothing in the Massachusetts statutes which gives to land-owners desirous of improving their wet lands, any power to interfere in any way with the rights of mill-owners, for the drainage of lands. The statutes of the commonwealth, however, make liberal and stringent provisions for compelling unwilling owners to contribute to the drainage of wet lands.

For the convenience of those who may be desirous of procuring legislation on this subject, we will give a brief abstract of the leading statute of Massachusetts regarding this matter. It may be found in chapter 115 of the Revised Statutes of 1836. The first section explains the general object.

"When any meadow, swamp, marsh, beach or other low land shall be held by several proprietors, and it shall be necessary or useful to drain or flow the same, or to remove obstructions in rivers or streams leading therefrom, such improvements may be effected, under the direction

of commissioners, in the manner provided in this chapter."

The statute provides that the proprietors, or a greater part of them in interest, may apply by petition to the Court of Common Pleas, setting forth the proposed improvements, and for notice to the proprietors who do not join in the petition, and for a hearing. The Court may then appoint three, five or seven commissioners, to cause the improvements to be effected. The commissioners are authorized to "cause dams or dikes to be erected on the premises, at such places and in such manner as they shall direct, and may order the land to be flowed thereby, for such periods of each year as they shall think most beneficial, and also cause ditches to be opened on the premises, and obstructions in any rivers or streams leading therefrom to be removed."

Provision is made for assessment of the expenses of the improvements, upon all the proprietors, according to the benefit each will derive from it, and for the collection of the amount assessed.

"When the commissioners shall find it necessary or expedient to reduce or raise the waters, for the purpose of obtaining a view of the premises, or for the more convenient or expeditious removal of obstructions therein, they may open the flood-gates of any mill, or make other needful passages through or round the dam thereof, or erect a temporary dam on the land of any person, who is not a party to the proceedings, and may maintain such dam, or such passages for the water, as long as shall be necessary for the purposes aforesaid."

Provision is made for previous notice to such persons who are not parties, and for compensation to them for injuries occasioned by the interference, and for appeal to the Courts.

This statute gives by no means the powers necessary to compel contribution to all necessary drainage, because, first, it is limited in its application to "meadow, swamp, marsh, beach or other low land;" the word meadow in New England, is used in its original sense of flat and wet land; secondly, the statute seems to give no authority to open permanent ditches on the land of others than the owners of such low land, although it provides for temporary passages for the purposes of "obtaining a view of the premises, or for the more convenient or expeditious removal of obstructions therein." The word "therein" referring to the "premises" under improvement, so that there is no provision for outfalls, except through natural streams.

On the other hand, it is manifest that the State assumes power sufficient to authorize any interference with private property that may be necessary for the most extended and thorough drainage operations. The power which may compel a man to improve his portion of a swamp, may apply as well to his wet hillsides, and the power which may open temporary passages through land or dams without consent of the owner, may keep them open permanently, if expedient.

By an act of the Legislature of Massachusetts, passed March 28th, 1855, ample provision is made for compulsory outfalls. The act provides that any person having the ownership of low lands, swamps, &c., that, by means of adjacent lands of other persons, or of a highway, cannot be worked, drained or used in the ordinary manner, without crossing said lands or highway may be authorized to establish roads, drains, &c., to said places. The process is by a petition to the County Commissioners, notice to all parties interested and a hearing. The Commissioners, if satisfied that the request is reasonable, shall proceed to lay out and establish the improvements, and assess damages equitably among parties benefited, to be paid to the party whose land is thus burdened.

An appeal lies to the county by either party dissatisfied with the award, as in cases of the laying out of highways. By an act of May 30th, 1857, it is provided that where the lands are all in one town, the selectmen may act instead of the County Commissioners.

By the provisions of these acts, we understand that any owner of "low lands, lakes, swamps," &c., may, in proper cases compel his obstinate neighbor to allow him to open such drains through adjacent lands as may be necessary to perfect his work.

The provision is broad enough for all low lands or swamps, and should be extended to all other lands, dams and other obstructions whatever, and thus place in the hands of the proper authorities complete power to do what is just and equitable, and for the public good.

It would seem, then, that the commonwealth, which is perhaps as conservative in her legislation as any other, assumes and exercises all the power necessary to authorize the most complete system of drainage. Whatever the powers of the States, upon the points suggested, there is no doubt of their power to protect the farmer, to some extent, against the encroachments of mill-owners and water-power companies. Our courts are teeming with suits between land-owners and these companies about flowage, and in these suits the corporations have usually the advantage of wealth and influence and concert of action, as well as of knowledge of the true state of facts, while the land-owner has the benefit usually of strong sympathy on the part of jurors.

The appointment of commissioners to examine, define and record, from time to time, the height

of all dams and embankments, the capacity of gates and sluice-ways, the agreed or ascertained rights of flowage, connected with all mills and reservoirs within their jurisdiction, and such other matters as might be necessary to make definite the respective rights of the parties, would tend to lessen litigation, and quiet much disagreeable and expensive controversy.

In those States, too, where it is deemed constitutional, provision might be made by proceeding before the same commissioners, for compulsory outfalls, upon proper compensation to owners, and even for partial or full contribution by unwilling owners, where lands are so situated that it is necessary, for the good of the whole, to interfere with property of owners who refuse to join in the enterprise.

WONDERFUL POWER OF FUEL.

It is well known to modern engineers, (remarks an English journal,) that there is virtue in a bushel of coal properly consumed, to raise seventy millions of pound weight a foot high. This is actually the average effect of an engine working in Huel Towan, Cornwall, England. Let us pause a moment and consider what this is equivalent to in matters of practice. The ascent of Mount Blanc from the valley of Chamouni is considered, and with justice, as the most toilsome feat that a strong man can execute in two days. The combustion of two pounds of coal would place him on the summit. The Menai bridge, one of the most stupendous works of art that has been raised by man in the modern ages, consists of a mass of iron not less than four millions of pounds in weight, suspended at a medium height of about 120 feet above the level of the sea. The consumption of seven bushels of coal would suffice to raise it to the place where it hangs. The great pyramid of Egypt is composed of granite. It is seven hundred feet, in the side of its base, and five hundred in perpendicular height, and stands on eleven acres of land. Its weight is therefore 12,700 millions of pounds, at a medium height of 125 feet; consequently, it would be raised by the effort of about 630 chaldrons of coal, a quantity consumed in some foundries in a week. The annual consumption of coal in London is estimated at 1,500,000 chaldrons. The effort of this quantity would suffice to raise a cubical block of marble, 2,200 feet in the side, through a space equal to its own height, or to pile one mountain on another. The Monte Nuovo, near Pozzueli, which was erupted in a single night by volcanic fire, might have been raised by such an effort from a depth of 40,000 feet, or about eight miles. It will be seen that in the above statement, the inherent power of fuel is, of necessity, greatly underrated. It is not pretended by engineers that the economy of fuel is yet pushed to its utmost limit, or that the whole effective power is obtained in any application of fire yet devised; so that were we to say 100 millions, instead of 70, we should probably be nearer the truth.—*Maine Farmer.*

THE CONCORD FARMERS' CLUB.

The meetings of this association have been attended through the winter, and the discussions sustained with unusual spirit and ability. The annual meeting was held Nov. 11, when the following gentlemen were chosen officers for the ensuing year;—N. H. WARREN, President; S. H. RHOADES, Vice President; JOSEPH REYNOLDS, Secretary; ELIJAH WOOD, Jr., Treasurer.

The President and Secretary were appointed to assign places of meeting, and subjects for discussion, on each week during the season. At the next meeting, Nov. 18, this Committee reported the following list of subjects to be discussed, in the order in which they are presented. The gentleman at whose house the Club meets, is expected to read an essay upon the subject to be discussed on that evening. These essays are read before the discussion. Farm Buildings, Rotation of Crops, Farm Implements, Market Gardening, Reclaiming Swamp Lands, Horses, Agricultural Books, Diseases of Farm Stock, New Plants for Cultivation, Manures, Swine, Grain Crops, Draining, Root Crops, Garden Fruits, Pasture Lands, Soiling Cows, Poultry, Flower Gardening, and Corn Culture.

At the second and third meetings, the subject of Farm Buildings, especially the structure and internal arrangement of Barns, was fully discussed. On the fourth evening, an interesting discussion was had, on Farm Implements. At the fifth meeting which was held, the subject of Market Gardening was discussed. In this subject was included the expediency and profit of farmers raising vegetables for the market, the best methods of cultivating certain vegetables, and the best and most profitable ways of conveying them to market, and disposing of them. The present mode of marketing produce is very laborious, and takes much of the time of the producer, and there seemed to be a general conviction that some other method must be adopted. If the produce of a town or neighborhood could be conveyed to market, by railroad, and delivered to an agent or agents, who should dispose of it for the producer, for a commission of a certain per cent. on the price obtained, it was thought it would be a better way than that pursued at present. This subject is now fairly before farmers, and if the managers of railroads will afford the needful accommodation, some plan will be devised, that will relieve them of the necessity and hardship of spending so large a part of their time in dragging loads of produce to market. Could some feasible plan be devised to accomplish this object, in which the expense should not absorb all the profits, it would open a new source of employment to farmers, and enable

them to compete successfully, with the market gardeners, in the immediate vicinity of Boston. There need be no fear of over-stocking the market, especially with those articles that are matured in the early part of the season, as radishes, asparagus, rhubarb, early peas, cucumbers, &c., as these are now sent to Portland, Bangor, Halifax, and other places, north and east, and the demand is annually increasing.

For the New England Farmer.

ST. HELENA POTATOES.

MR. EDITOR:—In 1856, I purchased six or seven potatoes of this variety, at Worcester, Mass. At the close of the Horticultural Fair, the productions were sold at auction, and seeing a plate of very nice looking potatoes, I secured them, at a high price apparently, at least it would be so considered in Vermont.

We have used them freely in our family this year, having raised over one hundred bushels, and find them a good potato for use. They grow large, and are not liable to rot, very smooth, as the eyes are directly upon the surface; very compact in the hills.

Messrs. Drew & French, in the New York *Tribune* of March 5th, describe the potato exactly, under the name of "Prince Albert." Upon the card attached to the plate of those I brought from Worcester, was the name of the producer, and also of the variety, and by that name we have called them. Are they the same, or not?

E. P. MUDGETT.

Cambridge, Vt., March 9, 1859.

REMARKS.—It is quite likely they are identical, for the same potato is often known by different names. The finest potato that we are acquainted with, or, at the least, one equally as good as any, is that called the "Riley," or "Dover," from the fact that a cargo of them was brought into the city of Dover, N. H., by one Capt. *Riley*. They are the true "*Irish Cup Potato*," and will at once be recognized as such by many of your friends from the Emerald Isle. There are two objections to them; they do not yield largely, and their eye cups are so deeply set that it requires much care to prepare them for the oven or the pot. But upon the plate, with a little sweet butter, the *Irish Cup* is a potato that will commend itself any where.

RUTLAND COUNTY AGRICULTURAL SOCIETY.—President, Daniel Kimball, of Rutland; Vice Presidents, Chauncey S. Rumsey, of Hubbardton, Alpha H. Post, of Rutland; Recording Secretary, Henry Clark, of Poultley; Corresponding Secretary, Orel Cook, Jr., of Rutland; Treasurer, Hon. Zimri Howe, of Castleton; Auditor, Ward M. Lincoln, of Brandon, and a Board of Managers consisting of twenty-five persons.

For the New England Farmer.

LETTER FROM CONCORD, MASS.

A California Picture—River Meadow—Horse Powers.

A gentleman in this town who returned from California an invalid, last summer, lately received from his partners there a very interesting ambrotype picture of their store at the mines, around which were quite a company of his old friends, and the train of mules which he had often journied with from their head-quarters at Marysville to this depot, among the mountains.

The picture was large, and exceedingly well taken. The express charges on it were *nine dollars*.

RIVER MEADOWS.

I am looking on, with a good deal of interest, to see what progress is made in getting down that ruinous dam on the Concord River. There has been no movement of a like importance agitated for years. It will take money to make it successful. Mr. Talbot bought and built in good faith. At that time the purchase, if necessary, of the privilege of flowing such an extent of country could have been most advantageously made. Now, it seems, Mr. Talbot has expended in buildings and peculiar machinery some *eighty thousand dollars*.

Now, what can you do unless you have about one hundred thousand dollars with which to commence negotiations? No amount of words or complaining will ever start a stone from that dam. The lever must be made of gold.

When one thinks for a moment of the rich alluvial lands that could so soon be made to yield the hay and corn to crowd a thousand barns, it seems a burning shame that the unfortunate barrier which stupid legislators allowed to be erected, should not be allowed to come down by their wiser successors.

HORSE POWERS.

While the horses stand idle in their stalls, their owners sweat at the wood-piles! Every farm of considerable size should have some sort of a horse-power. It should be located in the ample barn, where, on rainy days, the horse could drive a saw which would cut a cord every hour, easily. Then, how a horse can make a grindstone go around! I like to have a grindstone perfectly true, exactly round, and then go so that fire will occasionally start out. Where grindstones are turned by hand, they are very seldom burst by going too fast! The fact is, it is tedious work—the most so of all summer. Where a water power is not convenient it is a great relief to have the grindstone go by horse-power. The tools will always be kept sharper, and can be ground in less time. It is the height of folly to smash away with dull tools. It will pay to provide convenient means to keep them in order.

Hay cutters are made to attach to a power so that the hay, for a large stock, can be most expeditiously prepared. If one has a taste for the thing, the horse can saw the wood, wash the clothes, churn, turn the grindstone, cut the hay, shell the corn, drive the small circular bench saw, and pump the water.

Are not farmers less interested than other classes, in ingenious contrivances which expedite their business and save their strength?

March 1, 1859. W. D. B.

For the New England Farmer.

BLIGHT IN THE PEAR.

MR. BROWN:—Having been in the habit for years of examining the various accounts that have come to us, particularly from the South and West, where blight in the pear is more common than with us, we have been struck with the resemblance their seems to be between what they call frozen sap and scald, or sun blight; thus one writing from Mobile, describing its first appearance and effect upon his trees, corresponds entirely with a similar article from Illinois, from one who denominates his as frozen sap blight. We can hardly suppose that frozen sap blight could occur in the climate of Mobile.

We believe that there are two forms of blight, one form being caused by a severe scald, often produced by the practice of denuding the trees, when young, of their side, or latteral shoots, thereby exposing their naked trunks to the sun, for there are few trees in a young state that can endure the scorching rays of our August sun when thus denuded; there is a constant effort in young trees to throw out these side branches near the ground. The enlargement of the trunk of a young tree with its laterals uninjured, will be much larger in a given time, than upon one with these shoots removed. This we believe to be one of the causes, at least, of one form of blight. The other form, or what is called frozen sap blight takes place ordinarly upon trees that are forced in strong and highly manured soil when young, and by cutting off the tap root, thereby causing the tree to make long succulent shoots, the growth extending to so late a period as to be overtaken by the winter, before the sap is sufficiently elaborated, and the wood matured to stand a severe freezing. Rich soil with manure or excess of moisture undoubtedly increases the evil. The tap root, although not forming a part of every plant, when it does so, is an *essential* part of that plant, and the injury to any one part of a plant, occasions a change in the natural developments of the other parts. In allusion to this cutting and high manuring, it has been said that "nature, to be perfect in any of her works, should not be forced; we may be impatient, *not her*. In her elaborate and harmonious labors, time must be given for all things; and all we have to do, is to understand what she intends."

I would like to ask, if any one ever knew of our natural button pear trees to be affected by either of the above forms of blight. J. M. I.

Salem, March, 1859.

GROTON FARMERS' CLUB.

No town in our community gets up a better "Town Show," introduces more good articles to public inspection, or does its work in a more spirited manner, than the town of Groton; and there are few towns where a farmers' club exists, where the people seem to take so little interest in its affairs and "let it alone so severely." How these two things are to be reconciled, we do not know. The meeting on the evening of March 14th, at which we were present, was thinly attended, although the hall where it was held was in the centre of a populous village. The travelling was exceedingly bad, it is true, but in such a locality, the hall should have been crowded.

It is encouraging, however, to find farmers' clubs holding stated meetings, and their great work progressing, though it be sometimes with only little zeal. Groton, with her excellent land and intelligent population, ought to lead the way, and we found some among them convinced of this fact. There are many examples of good husbandry in the town. Gov. BOUTWELL has given one in the construction of his barn, and the accuracy with which he keeps his farm accounts,—being able at all times to show profit and loss in his operations. His well-arranged barn was filled with a fine stock of cattle. There are others excelling in different departments of husbandry, but whose places we had no opportunity to see.

For the New England Farmer.

THE CATERPILLAR.

The tent caterpillar, *(Clisiocampa Americana,)* has become famous for its ravages; so great are they that it is necessary to adopt every means in our power to check its progress, and to do this we must know the insect under all its forms.

In the winter there may be seen on apple trees, (as well as on many others,) at the ends of the limbs, a band of eggs, covered with a brittle, shiny, water-proof varnish, extending around the limb, and about one-half or three-fourths of an inch long; in this there are from three to four hundred cylindrical eggs, standing on end. When the leaves begin to burst forth, these eggs hatch, and from them proceed the small caterpillars which destroy those young and tender leaves. They make for themselves a white, silvery tent, in which they live when at rest, and from which they go forth for food; as they go they spin from their mouths a fine white thread, which guides them back to their home, and as they increase in size, still go over the same tract, until all the leaves are eaten. In their repeated journeys, the limbs get coated above with silk, which when observed, can often guide to a nest which would otherwise escape notice.

As the caterpillars grow larger, they increase their tent by adding layer upon layer of silk at a little distance apart, and so large do they sometimes make them when undisturbed, that they will measure six by nine inches.

The full-grown caterpillar measures about two inches in length, the head is black; the body is striped longitudinally with white, yellow and black, and in the yellow are many fine black ones; it is sparingly covered with short hair, most abundant on the sides. They leave the trees in the first part of June, and seek a place sheltered from storms, in which they spin their cocoons, which are of a oval shape, of a yellowish white color, caused by a powder that fills up the crevices between the threads of silk. From the chrysalis, in July, come forth the perfect insects; in this state they are moths of a reddish brown color, with two oblique white stripes on each fore wing,

the antennæ are feathered, and the thorax is very hairy; they expand from one and one-quarter to one and one-half inches.

There are four states in which these destructive insects may be killed. First, in the egg, by crushing the band of eggs, but as the eggs are small, this cannot be practiced to any great extent. Secondly in the caterpillar. Various measures have been advised to remove these pests, but the best that I have tried is to brush them off by means of a conical brush made for the purpose, and then crush them; this should be used early in the morning, at noon, or at night, for the caterpillars are out in the forenoon and afternoon only. Thirdly, in the chrysalis; this is easy enough, for when you find a cocoon, crush it; they are seen very plenty under tops of fences, and on buildings under the thick part of the shingles or clapboards. Fourthly, in the moth; the best way to kill them in this state is to build fires, in the places infested by them, in July, before they lay their eggs, for they will fly into the fire and get burned.

How they would disappear if every person killed every caterpillar he saw crawling on the ground, or every cocoon he saw sticking to a fence or building!

CARLETON A. SHURTLEFF.

Brookline, Mass., 1859.

SUPERPHOSPHATE OF LIME FOR TRANSPLANTING TREES.

Phosphoric acid possesses a very great and remarkable influence on the development of roots, causing plants to throw them out with unusual vigor; we do not know of any very satisfactory explanation of this phenomenon, either chemical or physiological, but of the fact itself there seems to be no doubt. The most convenient mode of employing this substance is in the form of superphosphate of lime, as it is called, that is to say, a mixture of oil of vitriol and burnt bones. This compound, which is rich in phosphoric acid in a soluble state, may be readily mixed with a little dry mould; it then forms a most valuable aid to the planter. Superphosphate of lime, is, therefore, a very valuable fertilizer in the hands of the planter; but in using it he must always remember that as his plants must necessarily absorb the whole or the greater part of the soluble manure which he gives them he must take care not to give them too much. He must not suppose that if one handful will do good, therefore ten handfuls will do more; it is very easy to give too much, and plants, like animals, may equally be injured by overfeeding or by starvation.—*Prof. Lindley.*

BUCKWHEAT AS FOOD.

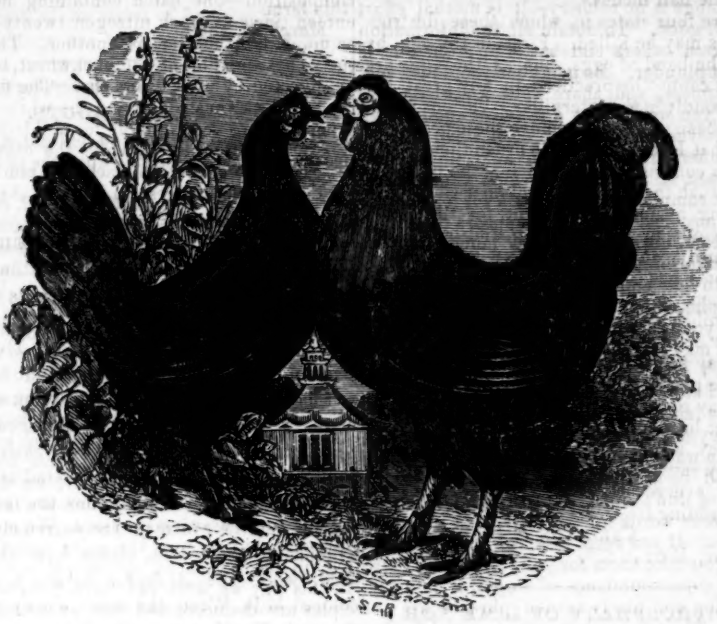
M. ISIDORE PIERRE has recently been making some investigations on buckwheat, from which is condensed the following interesting results:—Buckwheat cakes are equal to pure white bread as regards the phosphates or bone-making material, and nitrogenous principles which they contain, and are superior to bread in fatty matters. The general yield of buckwheat when cooked is about three times the weight of the flour used, showing that such flour will retain forty to forty-one per cent. of water. Between different batches of ground buckwheat is a great dissimilarity of composition—one batch containing nearly seventeen times as much nitrogen, twenty-five times as much fatty matter, as another. The bran is the richest portion of the buckwheat, but cannot be digested by weak stomachs. The finest qualities of buckwheat flour, and the white mill dust, especially, are very suitable for children and persons in delicate health, while the coarser varieties require a strong stomach and much exercise for their perfect digestion.—*Rural New-Yorker.*

HARDY NATIVE FLOWERS.

Among the most beautiful wild flowers that grace our meadows in summer with its unrivalled scarlet blossoms, is the *Lobelia cardinalis*, sometimes called the Pride of America. This plant is found generally on the borders of our brooks and wet meadows, and it seems to be almost the only plant, with the exception of the *Podophyllum peltatum*, or May apple, that will thrive equally well in our gardens. The Geradias, another beautiful genus, of which there are four or five species, on the contrary, are extremely difficult to raise in our gardens, either from the root or seed, while the *Asclepias tuberosa*, or orange colored Milk Weed, the most showy variety of that genus, will grow quite as well when transplanted to our gardens, as in its native woods. The *Hepatica triloba*, or Liverwort; the varieties of *Viola* or Pansy; *Hypoxis erecta*, or Star of Bethlehem; *Sanguinaria canadensis*, or Blood Root; *Anemone nemorosa*, or Wood Anemone, are of easy culture. Many of them will improve in size and beauty under cultivation. They are as showy as many foreign varieties for which high prices are paid. These will all thrive, if placed in moist soil, or in a half-shady part of the garden.

THE MILK TRADE.

The Committee on Agriculture in our Legislature has reported a bill in relation to the purchase, sale and measurement of milk. The bill is a fair one, and if passed, will tend to correct a good deal of corruption in the business, establish the measure so that every body may know what a quart or a gallon is, and greatly promote the chances for the people in the cities to get pure milk and just measure. We trust our friends will attend to this matter now, and place before their members of the Legislature, all the facts they may possess, to enable them to show why the bill should be passed. The opposition to the bill comes from the milk-venders, who now purchase *seven* or *eight* quarts and sell it for ten—to say nothing of water added. Milk raisers in the country have no time to lose in attending to the matter—it is one of great importance, and should receive prompt and energetic attention.



THE GUELDERLAND FOWL.

In *Bennett's* Poultry Book, page 82, is the following account of this breed of fowls:—"I am indebted to Mr. H. L. Devereux, of Boston, for the following account of the original importation of this breed, and a description of those in his possession.

"The Guelderland fowls were imported from the north of Holland, some years since, by Captain John Devereux, of Marblehead, in the ship Dromo; and since that time have been bred purely by him, at his place in that town. They are supposed to have originated in the north of Holland. They are clad in a beautiful blue-black plumage, but the flesh is white, tender and juicy. They have no comb, but a small, indented, hard, bony substance instead, and large red wattles. They are of good size, great layers, seldom inclining to sit; bright, active birds, and are not surpassed, in point of beauty or utility, by any breed known in this country."

SPAYED COWS give much better and more healthful milk than cows in the natural state. So, at least, says a French work on this subject. The cow will continue to give milk, in this condition two or three years; then she will fatten easily, and make excellent beef. This may be true; but American dairymen will not soon adopt this practice in regard to their cows.

For the New England Farmer.

HINTS TO FARMERS AND CORRESPONDENTS.

FRIEND BROWN:—Farmers like short articles—the words and thoughts of practical men, few, plain, and straight to the point. Why don't they write, then? Why don't *more* of them write?

"Why, bless us!" says the editor, "we have a multitude of correspondents, and more communications than we can publish—our journals cannot *contain everything!*"

True, very true, no doubt, but with the best care on the part of correspondents, there might be a little more room. If all would remember that farmers know good corn without seeing the husk and cob, they would often send smaller grists to the publisher's mill. Well considered and condensed articles are always acceptable in however humble a dress they may appear. They are usually the best for those who *do*, and always the least in the way of those who *do not*, need the information they convey.

Here are some subscribers behind the editorial chair—shall I speak with them a moment?

The publishers of this excellent journal have undertaken to run an express weekly, or monthly, to every New England farmer's door. They distribute all sorts of farming articles, theoretical, practical and mixed. With the aid and care of the editor, they have done excellently well in every respect. But farmers and gardeners, much as they are doing now, will do still more, if you say the word, and with mutual benefit. They might take a seasonable article from each of you

occasionally, and distribute to every other subscriber—every other will give thanks and forward parcels by aid of the same express to you. Fair exchange is no robbery—it is mutual effort for mutual good. To obtain all the information you can from others and bottle up your own is downright plunder. Be neighborly and just, successful farmers, and share your knowledge all round. If you won't, pray don't ever again laugh in your sleeves, or anywhere else, when you see another suffering great loss in a farming operation for want of information which you possess. And don't complain of young men for leaving the farm for any Eldorado that appears to offer a golden gleam, until you take as much pains to learn them farming as you do to teach a two-year old steer to *haw* and *gee*.

May it please you to give us some crumbs. I speak for young farmers, and ignorant ones, but the wisest may learn something of each other.

We don't ask you to write elaborate essays. Few would stop to read them in the busy season, and if once laid away, would perhaps never. Although they might be good as a minister's sermon all the way down to "eleventhly," if too long they would be of little general value. Working farmers don't often hunt through a bushel of superfluous words for the disjointed members of one idea. If you send most of your notes in the style you take them for your own use, there will be no superabundance of words, I dare say. Fine writing and nicely turned phrases are not essential. An iron bar is no more useful for being eked out at the top with feathers, nor is it necessary to knot your ox-chains with ribbons, unless it be cattle-show day. Be short, clear, concise, practical, and there will be room enough for all. N. PAGE, JR.

Danversport, March 26, 1859.

For the New England Farmer.

SOILING OF CATTLE.

My attention has recently been called to this subject by a publication made by the Senior Quincy, and the impression from the perusal of his Essays is so strong, that I feel constrained to invite the attention of all who would advance their own interests and that of their neighbors to what he says. He clearly demonstrates, that in the mode of proceeding which he points out, as many cattle can be as well kept, for all the purposes of farming, on 40 acres, as are now kept on 160 acres, in the ordinary modes of keeping, by those who are esteemed good farmers.

What, then, is the result of such management? The young man who intends to be a farmer, starts at the age of 21, with his 40 acres of land costing him $4000. He appropriates one-half of it to the feed of his stock, and the other half to the growing of hay and other purposes of the farm. He will find himself able to maintain 20 head of cattle, through the year, on a farm thus managed. He will find the net income of a stock thus managed not less than $1000 per year. Will not farming thus conducted pay? This is not mere fancy speculation. Mr. Q. says he has tried it for many years successively, and knows what he says is true. I know a man, who forty years ago, purchased a lot of land; on the shore of the sea, 40 by 160 rods; and who then erected buildings upon it, and has since so managed it, as to realize, at least a net income of $1000 a year from this farm. ESSEX.

March 25, 1859.

For the New England Farmer.

HAY AND ROOTS.

MR. EDITOR:—Can you enlighten us by any fact or suggestion bearing upon the two following questions:

1. If you had first quality hay, (i. e., the *very best* which our farmers get in,) would you use any roots with it in wintering your stock?

2. If you should use roots, what would they be worth per bushel to you—that is, if the market value of turnips was two shillings per bushel, and the value of other roots corresponding; which would you do, carry your roots to market, or feed them with *first quality* hay?

Can you oblige us by answering the above practical questions; also, giving us your reasons.

We have a "Farmers' Club," which meets every Monday evening, at different farm houses, and there, in a very social manner, we discuss the different points arising under the subject announced the evening previous. We make no set speeches, but we pass the point round, demanding, in every case, an opinion, if not a reason. In this way we draw out facts, from which principles are deduced, and thus an actual progress insured. The plan succeeds admirably. Of course we have a constitution, officers, and other essentials to an organized body. The admission fees, together with the voluntary contributions of the members, provided us with a little library. But what I would especially call your attention to, is the informal, social features of the club meetings. Queries are raised, experience brought out, facts established and principles evolved in this way, which otherwise would never, or very seldom, appear.

The above questions arose under the subject of "Winter Management of Stock," and we should be much gratified to have an expression from you. WARREN JOHNSON.

Topsham, Me., Feb., 1859.

REMARKS.—If common flat turnips would net us thirty-three cents a bushel, and other roots bring a corresponding price, we would take them to market, and for this reason: On suitable land we ought to expect 600 bushels of turnips per acre, and at 33 cents a bushel we should get $198 income from an acre of land. Such an income could scarcely be expected from any of our ordinary crops, and it would be better to secure that sum for the turnips, and expend it for some kind of grain, if we wished to feed something besides hay.

Your plan of a Farmers' Club is the true one. We have been attending one similarly constituted for nine years; but we make "set speeches," that is, four leaders are appointed on each question, and they have precedence, speaking in order, and without interruption.

TENTH LEGISLATIVE AGRICULTURAL MEETING.

[Reported by John C. Moore, for the N. E. Farmer.]

The tenth of the series of Legislative Agricultural Meetings was held in the Hall of Representatives, on Monday evening last. The attendance was moderate. The subject for discussion was, "*The culture and cure of the hay crop.*"

Hon. John W. Proctor, of Danvers, occupied the chair; and in introducing the discussion, said in substance, that although he could not go into the statistics of the value of hay, as compared with other crops, it was, nevertheless, one of the most important crops grown in the State. He would speak from his own practice; and what he would say relative to the management of hay should proceed from that source, and would apply to all kinds of hay. In olden times the hay seed was generally sown with the oats or wheat in the spring; but latterly, it was customary to plow and sow the seed in August, and the practice would become more common as its benefits were realized. This method produced from one and a half to two tons per acre. One friend who mowed seventy-five acres had an average of one and a half tons per acre. Some of the farmers on Marblehead shore have brought over 100 tons per annum to the Boston market. The annual produce of the old Alley farm was two tons per acre. This was produced by the use of sea-weed as a top dressing, after the summer crop was removed.

Mowing.—The method of cutting hay with the scythe was fast dying out, and machine labor being introduced. Several machines—among them Allen's, Ketchum's, Manny's and Russell's,—were approved, although none of them were perfect. The best were Allen's and Ketchum's. By the use of the former, in July and August, one gentleman cut 300 acres, producing 500 tons, at the rate of 50 minutes per acre. In some instances he cut an acre in 30 minutes. Mr. P. saw an acre cut in 40 minutes, and a skilful man, with a pair of horses of 1000 lbs. weight each, would cut at least, 10 or 12 acres a day. This being the case, the importance of encouraging the improvement of these machines was obvious. The *Massachusetts Board of Agriculture* had awarded $1000, which had been given to the Eagle or Heath Mower made by Mr. Nourse, of this city, and which machine was worthy the award. On level land it worked well, but was not, probably, fitted for uneven, rocky land. Allen's machine was better adapted to uneven surfaces; and mowed an acre of that in an hour. But probably machines were not properly adapted to hay cutting in such land—although, if they could be, the advantage would be very great indeed.

Making.—After being cut, the hay, instead of being manipulated by hand power, stirring is now advantageously done by a hay-tedder, operated by horse-power, one of which was shown by Dr. Loring, of Salem, at the last Essex County Exhibition, and several others have been tried in other parts of the State. But still the principle of this machine was defective, and much room for improvement existed. With the *rake*, properly used, by horse-power, we had all the machinery of working hay in as perfect order as the power of modern invention could make them, and by its use one-half of what has heretofore been the labor of haymaking can be saved. Some people turn up their noses at the mention of machines for making hay, contenting themselves with their old-fashioned implements. Such persons, if they wanted a shirt, would not surely carry out their theory in that respect, and refuse to buy and wear one which was not spun and woven in the old-fashioned way. There would be about as much consistency in the one objection as in the other; for it is well known that 500 yards of cloth can as easily be made in an hour, by machinery, as five yards could be by the old family processes. Leaving the matter of sowing, managing and curing hay to other gentlemen, the president took his seat.

Mr. B. V. French was called on to speak, and directed the attention to the fact that there were too many fresh-water meadows in the State, which were unhealthy in summer, and unproductive of healthy food for cattle. Draining of such swamps, and their proper management thereafter, would result in great comparative profit—were it simply on account of the killing of the tough aquatic grasses. Mr. F. quoted the opinion of Prof. James W. F. Johnston, of Edinburgh, that, of all our crops, the hay crop was the worst treated with us. The preparation of our lands was not calculated to produce well, and little attention was given to manuring, so that no crop of value could be produced. At considerable length, and with great minuteness of detail, Mr. French went into a disquisition on the modes by which these evils could be corrected, and the quantity and quality of grass and hay would be greatly improved. Pastures, in particular, were not so good as they ought to be, and this was a subject for improvement which should not be lost sight of. The proper selection of grasses was also a subject of importance. Sweet vernal grass was recommended as being one of the best for butter-producing purposes.

Mr. Josiah Quincy, Jr., wished to know from the experience of gentlemen what is the best method of top-dressing grass lands? His plan was to keep cattle during winter, mix their manure with swamp muck, and dress and plow the land in autumn, as had been recommended by

the president. Experiments in this way had been favorable with him. Having plenty of manure, how could it be best applied to grass lands? Could it be profitably done without breaking up, and by means of top-dressing? Breaking up had been deprecated by Hon. Simon Brown, and others, in the Patent Office Report; and what Mr. Q. wanted, was, to know what he should do with his manure so as to make his grass lands yield two tons of hay, per acre, and keep the yield permanent.

Mr. SANFORD HOWARD corroborated the experience of Mr. Quincy with regard to the culture of his grass lands, and their produce, and also some observation made by him concerning the cultivation of hay lands by top-dressing in England and Scotland.

Gen. SUTTON, of Salem, stated that he cultivated his hay lands in September, manuring them well, and sowing them with herds-grass and clover. He let them lay five years without lifting, and always top-dressed in the fall.

Mr. LAWTON, of Great Barrington, had a different sort of land to deal with than the sea-coast farmers, and had to experiment differently, and with more limited means than they had; but the general management was not materially different. He had cultivated land for hay for 30 years without breaking up, and had realized as much as two tons per acre. He did not approve of overgrown crops of hay, as it wanted consistency, and did not go so far with cattle as an ordinarily good crop. When he prepared land for hay, he drained, plowed deep, harrowed well, used ashes and compost and planted corn, plowed again in the fall and manured with compost and sowed down with red-top, timothy and clover. As to the time of cutting grass,—if it was cut before it became woody, it would make excellent hay; but if it was allowed to stand too long, two-thirds of its nourishment would be lost. This was a most important consideration; and taking into the value of the hay crop, was a particular that should not be slightly glanced at. Mr. Lawton approved of a light irrigation in the spring as being of much benefit to grass in its earlier stage. If more care were paid to our hay, we would not want so much of it, and what would be of as much consequence, our cattle could rely on the nutritious value of what they did eat. Mr. L. top-dressed his meadows every second year, and disapproved of growing green crops on lands to be plowed in as manure, as he never had any success from it—and especially from the use of buckwheat in this manner, which produced an acidity in the soil that was not favorable to the healthy growth of grasses.

In reply to Mr. W. J. BUCKMINSTER, Mr. Lawton stated that he underdrained soft meadow land, and also wet upland, with great profit. He had raised wheat on such lands after draining, when it never could be raised previously.

Mr. LEANDER WETHERELL spoke to the question raised by Mr. Quincy, and mentioned lands in the State which had yielded two crops every year, after top-dressing every second year—or three tons to the season; but the owner did not feed his land with cattle. This experience seemed opposed to the theory of breaking up grass lands—or what was called *natural mowing*—land that had never been turned up by the plow within man's memory. The fall is generally the better time for top-dressing—if the ground is not liable to be washed; if it is so, the better plan would be to manure in spring. A rule in the middle of the State was to manure these *natural* grass fields as soon as the crops were taken off. Clover, red-top and herds-grass were the best kinds to be used for seeding land. Mr. W. had no great opinion of the value of the new kind of grasses, at present recommended as forage grasses; and was surprised at the small quantities of forage grown per acre in the commonwealth. The average was short of one ton to an acre. Nantucket gave nearly an average of two tons. Farmers could not, surely, afford, to use their lands for so little; and would they so determine, the best way would be to go into improvement without delay, and raise four tons per acre, as had been done in one instance on record.

The PRESIDENT said that, near Ipswich, and in that locality, generally, which was famous for growing hay, it was customary, after the crop had been taken off, to run an iron-tooth harrow over it, put in seed, bush harrow it; and in this way there was much renovation. Mr. Proctor did not approve of allowing cattle to feed on lands intended for hay, as they poached it in wet weather. Mr. Wetherell agreed in this opinion.

Mr. W. J. BUCKMINSTER took a general review of the discussion, pointing out such features in it as harmonized with each other, and were certified scientifically. He concluded by eulogizing the policy of using labor-saving machines in agricultural operations, which latter subject was discussed by several other gentlemen up to the time that the meeting broke up.

Mr. QUINCY, and other gentlemen, approved of the use of hay-caps, and stated that, in catching weather, they would pay for themselves in one year.

The question for next week will be, "*The best mode of improving the present system of New England farming;*" and it is expected that Hon. JOSIAH QUINCY, Jr., will preside.

TREATMENT OF RINGBONE.—"Will you or any of your subscribers, tell me the best and safest

way to cure a ringbone, and not leave a scar or blemish on the foot?"

We have never known a case of confirmed or decided ringbone cured by any process. A scar should never be made in treating it. Cutting and burning should never be allowed—they are both cruel and useless.

The best medicine for man or beast, to preserve health, is exercise; the best to restore it, is rest. This latter is the king of medicines, and we could enumerate some of its surprising cures. For incipient ringbone, this is emphatically the remedy. Dr. Dadd recommends in addition, an application of acetate of cantharides, as being milder and better than common blistering. When the part becomes hot, apply cold water bandages.—*Country Gentleman.*

For the New England Farmer.

VEGETABLE PHYSIOLOGY.

Mr. Editor:—An inquiry from Wm. R. Putnam, of Danvers, led you, in your issue of Feb. 26th, into some detailed remarks on the physiology of the growth of trees. From these laws of vegetation, corroborated also by large personal experience, you draw the conclusion that the only fitting season for pruning is the months of June and July. I intend to take issue with you in certain respects, on this point, although I may agree with you in regard to it, in others. Before going further, however, permit me to ask, whether your statement, under the head of *respiration* in plants, is correct, namely, that the leaves absorb oxygen and evolve carbonic acid gas. It is contrary to what I have been taught, and to the statement in the next paragraph, "that oxygen is evolved, and carbon solidified." Lindley says, "When a plant is exposed to the direct influence of the sun, it gives off oxygen, by decomposing the carbonic acid; whereupon the carbon remains behind in a solid state."

In regard to pruning, I have always considered that the appropriate season should be determined by the ends which the pruner has in view. These are twofold; 1st, improved shape, increased vigor; 2d, production of fruit.

In pruning for shape or vigor, the most suitable time, in my opinion, is after the fall of the leaves, no matter how late. My reason for pruning at this season is as follows: during the season of rest, as long as the ground remains not frozen, a plant continues to absorb food from the soil by its roots. The sap thus garnered, is not, however, distributed though the branches until the warmth of spring brings about a renewal of the circulation. Consequently, if branches are removed in early winter, all the sap which has accumulated in the roots during the interval will be distributed among the remaining branches, now fewer in number, imparting to them additional and freshened vigor. If pruning should be deferred until late in the spring, so late that the accumulated sap is already distributed, then each branch and each shoot that is removed carries with it just so much sap, and consequently the loss of so much vigor.

The question now arises at what time this winter pruning should terminate; at what season the flow of sap is so far advanced as to deprive the tree by the loss of wood, of the store which it has been accumulating. What do writers teach on this point? Lindley says; "As pruning, however, is not always intended to increase the vigor of a tree, late or spring pruning, if not deferred until the sap is in rapid motion, may be more judicious." "The season for pruning is mid-winter or mid-summer; the former, for thinning and arranging; the latter, for removing new superfluous wood." "By late pruning, a large proportion of the accumulated sap is thrown away." My own work in this particular is always ended by the first week in December.

The following passage is from D'Albret:

"In taking branches from a tree when stripped of its foliage, during winter, January, February, and March, when the sap is in repose, concentrated in the roots and woody parts, none of it is lost; it all goes to the benefit of the tree wherein it has retreated."

I quote again from Du Breuil: "The suitable period for pruning is during the repose of vegetation, from November to March; but, between these two limits, the most favorable time is that which follows severe frosts, and precedes the first movements of vegetation, about the month of February." Now, as spring, in France, about Paris, is fully a month earlier than with us, it follows that there would be no disadvantage in pruning, in Massachusetts, as late as the middle of April.

Once more, from M. Hardy: "In the climate of Paris, pruning may be carried on all winter, except during severe frosts. But the most favorable season in all countries of which the climate approximates to that of Paris, is February and March, after the severe cold weather has passed. As the apple tree is one of the most tardy in coming into leaf, the pruning of it may be deferred still later."

The writers whom I have just quoted are the highest authorities in France and England. I would not, however, be understood to intimate that authorities and theories should take precedence of experience and observation; but the Frenchmen whom I have quoted unite large practical observation with a high degree of scientific knowledge.

With regard to my own experience in fall pruning, I will merely say, without entering into any details of my system, which might be not only interesting but useful, that during the last six years I have taken the entire care of a young orchard of two hundred trees. All the pruning has been done by myself, begun after the fall of the leaf, and terminated in the early part of December. I cannot recall a single accident of any kind which I can refer to winter-pruning; the wounds have always healed smoothly.

I shall be pleased to give you and Mr. Putnam an opportunity to criticise winter-pruning. In regard to pruning for fruit, I may have a few words to say at another time.

As the French writers whom I have quoted may not be known to your readers generally, I will say that D'Albret was head gardener for thirty-two years, in the department of fruit trees, at the Garden of Plants; Du Breuil is professor of horticulture in Paris, and his work has obtained prizes from the Agricultural Societies of Paris, Rouen and Versailles; M. Hardy is head-

gardener of the gardens of the Luxembourg, Paris. G. H. LODGE.

Swampscot, March 3, 1859.

REMARKS.—We are glad to find attention drawn to this important subject, and thank Dr. LODGE for the interest he manifests in it. We did not intend to say, nor, upon reference to our article, do we find that we did say, that *midsummer is the only time* to perform that work. We say this—that in our judgment, midsummer pruning is best, but we have often said in these columns, that if not done then, any time after the fall of the leaves, and while the tree is in a state of rest, or, at least comparatively so, pruning may be safely performed. But this state of rest is much shorter than most persons are aware of. Elms, maples, and other trees, whose twigs were as smooth as pipe stems, showing no swelling of the buds whatever, on the first of January last, had their tops so thickened up by the *15th of February*, as entirely to change their appearance! We have called the attention of many persons to this fact during the winter. Our opinions seem to be at variance with that of the Doctor, not so much in regard to the proper time for pruning, as *to what time the tree is in a state of repose.* We are writing now on the *8th day of March*, and any person who visits the Common may see trees whose buds are already so swollen as to essentially darken the heads of the trees. These buds were so minute on the *1st of January* as not to be perceptible; they have grown since, and consequently the tree, during warm days, has been in a state of activity. That activity will continue until about the middle of June, when the elaborated sap has mostly returned to form wood, fruit, and perfect seeds.

For the New England Farmer.

LAME HENS THAT DIE.

"M. O. H." informs you he has lost fifteen or twenty hens since last fall. A few years since I had occasion to fix over my hen-house, just as winter was coming in. I had some nice poles, one and one-half inches in diameter, unseasoned from the woods, and being very straight, I thought they would make good roosts for my hens, and accordingly I put up sufficient for them all with these poles. In the winter, I found some of my hens limping, and some died; they were fat, but their toes indicated that they had been frozen. I had seldom ever seen a hen on the cold ground with both feet, as one is usually up among the feathers for a short time, and then the other has its turn; but I have never noticed a hen with one foot on the roost and the other among the feathers. It then occurred to me that I had made them a bad roost.

The hen needs a roost of sufficient size so that the toes and foot can be protected from the cold by her own feathers; in this condition she sleeps with her toes in a warm, feather bed. If her toes lap over and under a roost, her feathers cannot reach them, and her toes will certainly be frozen, and in repeated freezing she becomes sick and finally dies, before she has time to lose her flesh. Make your roost five inches in diameter; the hen sits on the highest point and warms her own feet. E.

Biddeford, Me., Feb. 14, 1859.

POWERS INSTITUTE.

On Thursday evening, the 17th of March, we had the pleasure of meeting the officers of this Institute, the officers of Instruction and Government, the pupils and many of the citizens of the beautiful town of Bernardston, at the recitation rooms and Hall of the Institute. L. F. WARD, A. M., is the Principal; Mrs. E. H. WARD, Preceptress, and teacher of the Ornamental Department; Miss S. L. LEACH, Preceptress; SERVIN SCHNELL, native of Germany, teacher of German and Librarian; C. F. SCHUSTER, teacher of Music; J. B. CANTEL, native of France, teacher of French; CHARLES G. ALLEN, teacher of Penmanship; EDWARD B. PHILLIPS, teacher of Vocal Music, and WILLIAM DWIGHT, M. D., lecturer on Physiology.

This Institute had its origin in the munificence of EDWARD EPPS POWERS, late of Columbus, Georgia. To his native town, Bernardston, he devised ten thousand dollars, the income of which is to be used for purposes of education in said town. To this bequest, the citizens have added liberal sums, so that they have constructed a fine building containing commodious rooms for recitation, library, philosophical apparatus, &c., and a large and beautiful Hall for declamation and lectures.

But what is more attractive to us than any of these, and gives this pioneer institution its crowning merit, is its *agricultural feature.* Before entering the Hall, we were invited into one of the recitation rooms, where Professor Ward introduced us to his class in agriculture. This class numbered seventy, about one-third being young women, and both sexes being of the ages of seventeen to twenty-two. A more gratifying spectacle than this we have rarely witnessed. Questions were put to them in relation to chemistry, plants and soils, which were answered promptly, intelligently, and with a most lively interest. While they understood the purport of the words they were uttering, they seemed to feel the importance to the world, of the noble ART whose mysteries they were exploring. From such a germ as this, what grand results may flow! What investigations, what intellectual labor and profits may result from this beginning! The establishing of such a class as this in so popular an

institution, cannot fail to produce the most happy influences upon our rural population. It has our hearty sympathy, and warm wishes for success.

The pleasure of addressing this class, the other pupils of the institution, and the citizens generally, was reserved for us for the evening—this being the first lecture of a series, several of which are to be upon agricultural topics.

Our stay in town was made agreeable by kind attentions from all with whom we came in contact, and especially by the cheerful hospitalities of Gov. CUSHMAN and lady, whose guest we were during our brief, but highly interesting visit.

For the New England Farmer.

THE SEASONS.

How beautiful is Spring! Every one hails it with joy, as it comes decked with lovely flowers, and with green robes for all the vegetable world. All Nature, animate and inanimate, is subject to its influence. Birds return from Southern climes to enliven the scene with their cheerful melody. The various animal tribes express their delight, each in its own peculiar manner. Man, too, partakes of this universal joyousness. The young are jubilant, the old are electrified, and in a measure rejuvenated, and a grand chorus of admiration ascends from every valley and every hill-top. This is the season of PROMISE.

Summer succeeds. The seed has been committed to the earth, the tender blade is shooting forth, and careful culture and training are needed to insure a crop. Anxiety oft takes possession of the mind, producing a salutary effect by inducing a greater degree of watchfulness. Occurrences beyond our control may sometimes blight our prospects, yet upon our own exertions, mainly, depends a renumerating harvest. A little neglect is often highly detrimental. This is the season of HOPE.

Autumn follows, when the promise of Spring, and the hopes of Summer, are to be realized. If we have sown in good soil, and have cultivated the tender plants with proper care, imploring, the while, with grateful and prayerful hearts, the blessing of benignant Heaven, we shall now receive an abundant harvest. This is the season of FRUITION.

Winter, the season for CONTEMPLATION, soon arrives, with its icy blasts and howling storms, but he who has acted well his part in the preceding seasons, will be prepared for this. Plenty has crowned his labors; his garners are full, and he may sit quietly and comfortably by his own fireside, undisturbed by wind or storm, and unscathed by the pinching hand of want. He reflects upon the past, anticipates the future, cultivates his intellect, and, with the eye of one who has done his duty,

"Looks through Nature up to Nature's God."

In contemplating the vicissitudes of the seasons, he can exclaim with the poet of Nature,

"These as they change, Almighty Father, these
Are but the varied God. The rolling year
Is full of Thee."

Bloomfield, C. W. L. VARNEY.

For the New England Farmer.

APPLE ORCHARDS.

"When doctors disagree, who shall decide?"

Mr. PUTNAM, of Danvers, tells us through the *Farmer*, that he, and his neighbors, have practiced pruning their apple trees in the spring, for the last fifty years, and as yet have discovered no injurious effects by so doing. But the editor comes out with a good, sound, philosophical argument, to prove that the spring is, of all seasons in the year, the worst time to prune apple trees. I believe the editor is right, because he gives his reasons, backed up by long experience, and that experience tried by both rules is worth more than a whole volume of theories. This is the kind of evidence I like, proved by practical experience. Theories are good enough, when proved and made to be facts. It is possible that trees in a good soil, may be practiced upon in the manner friend Putnam has done, and not only "still live," but give signs of good treatment, yet that does not prove that trees thrive *best*, under such treatment. People are strongly attached to old customs, and are ready to follow them, without thinking whether they are right or wrong. I once thought, like many others, that the spring was the proper time to prune apple trees.

But a few years ago, a man came along with the *N. E. Farmer*, and told me that if I wished to take one of the best agricultural papers in the country, to just put my name on his book, and my wishes would be gratified. The man looked honest, and I took his word for it, and put my name down. I have since learned by reading the *Farmer* that the man told the truth. The *Farmer* told me to leave off that unnatural practice of bleeding my trees in the spring. I took the advice, and that has paid me for the paper ever since. But that is only a small part of what I have learned by reading the *Farmer*. If I find some articles published in it, written by correspondents, that do not seem practical or true, I think them of some value, because they call attention and thought upon the subject, and by that means facts are ascertained.

A man stated some months ago that he raised an enormous crop of wheat, by planting it in hills. The story was incredible, it seemed an impossibility. But, if it was one-half true, it was valuable information. Because, if it is discovered that a better yield of wheat can be produced by planting in hills or drills, it is an important fact. As we are now upon the wheat subject, allow me a few words upon this head. Why is not wheat more generally raised in New England? Is it not a profitable crop? Some say it is, others say it is not. Here they disagree again. But there is Mr. A., who raises a good crop of wheat every year, enough for himself, and some to spare. But, there is Mr. B., right by his side, who says he can't do any thing with it; it will rust and mildew, and is a very uncertain crop, it don't pay. Now where is the trouble? I rather guess Mr. B. don't take the *Farmer*. (By the way, I wish the *Farmer* would say much more upon wheat-growing.) Wheat is one of the staple articles of food in our country, and its cultivation should be well looked after. It is successfully raised in most all parts of New England, and es-

tablishes the *fact* that it *can* be done. We ought not to be wholly dependent upon the West, and the mercy of speculators, for our flour. What is needed, is a proper knowledge upon the cultivation of wheat; it is evident that the soil has become exhausted of the elements which are requisite to produce it. Undoubtedly, there are fertilizers within the reach of every farmer, if known, which could be applied to the soil and supply the deficiency. And I believe, that with a proper care, in selecting and changing the seed, and sowing it in drills, at the proper time, wheat may not only be made to *pay*, but be a profitable crop to the farmers in New England, and their eyes be gladdened with the sight of a *golden* harvest of wheat every year. Who can enlighten the farmers on this subject? Ye wise ones, let your light shine through the *N. E. Farmer*, that it may "run to and fro, and knowledge shall be increased." A. PHILBROOK.

East Saugus, March 16, 1859.

REMARKS.—The kind words of our correspondent are encouraging. He confirms what we feel assured are facts with regard to pruning. There are few orchards twenty-five years of age which have been spring-pruned, that do not bear evidences of injury from such pruning; and we have no doubt, whatever, but we can find them in Mr. Putnam's. Friend Putnam may expect us to make him a call some pleasant morning, when we will compare notes.

For the New England Farmer.

KICKING COWS AND STUBBORN CALVES.

MR. EDITOR:—I perceive that your readers are having some experience with kicking cows, on which subject I have a word to offer. I have a beautiful four years-old cow, and a good milker; kind and gentle when her teats are not sore, and her treatment is exactly in accordance with her notions of right; but otherwise a very expert and furious kicker. With one fore foot strapped up, she will kick with the hind leg of the same side, so as to knock a pail out of my hands, or strike me above the knee. With a rope and twister around her, she will distort the symmetry of a milk pail, instanter.

But I can milk her with perfect safety to myself and pail, by putting her in the stable with a common chain tie, then lashing her body, just back of her fore legs, firmly to a strong, short partition, not extending far enough back to be in the way of milking; and lastly by attaching a strap to the hind leg, on the milking side, drawing the leg back out of harm's way, and so as to give a liberal exposure of the udder, and a wide berth to the pail, and making fast said strap near the floor in the rear. All which appliances can be adjusted in two minutes.

To teach a calf to drink milk, I construct a stall, or box, for him, so narrow and short that he can neither turn round, lie down, or move forward or back, with his head over a large wooden bowl made stationary at the proper position for drinking. Then with my hands and fingers work away. I do not hold the calf, the box holds him; he cannot waste the milk; yet it may take three or four days, at intervals, to teach him to drink. I should have stated that the box or calf stall has a door, or movable board, in the rear, so as to get the calf in and out easily.

I. B. HARTWELL.

Wilkinsonville, Mass., March 21, 1859.

EXTRACTS AND REPLIES.

BLACK SPANISH FOWLS.

Have you eggs to sell from pure black Spanish fowls? I also wish to get some Bolton Grey fowls. Can you tell me where to procure them?

Dover, N. H., 1859. B. G. O.

REMARKS.—We have often given ourselves considerable trouble to answer questions similar to the above, by going to the places where fowls and eggs are sold, when the dealers ought to make known their trade by advertising. But as they prefer *not to help themselves*, we have concluded not to help them any longer. There are plenty of the fowls and eggs which you inquire for in this city.

PROLIFIC PUMPKIN SEED.

SAMUEL HURD, Esq., of Leicester, exhibited at the horticultural exhibition in this city, last fall, 19 sweet pumpkins weighing 110 pounds, which, with two that were not ripened, grew upon a vine measuring with its branches, 190 feet in length—and the whole is the product of *one seed.*

I purchased the above pumpkins of Mr. Hurd, and have used them through the winter, eating the last of them, last week. They were of the most delicious flavor. I have saved the seeds, and they number 10,341 good seeds. E. H.

Worcester, March 12, 1859.

OATS TURNED TO RYE.

I saw in a late *Farmer* an account of oats turning to rye, as being a late discovery. Seventy-four years ago, my father moved into Randolph, Vt., and two other families at or about the same time. One man of the number sowed half an acre of oats too late; he let his oxen feed on the oats as long as they sprouted up through the season, and the next spring they grew up, and the latter part of the season he harvested a crop of good winter rye. LEANDER TURNER.

East Bethel, Me., 1859.

CURE FOR POTATO ROT.

Mr. ROBERT FRENCH, of East Haverhill, N. H., states that the potato grown from seed that has been soaked one hour in blue vitriol water will not rot. His recipe is "one-fourth of a pound of blue vitriol dissolved in three parts of water; cut the potatoes and soak them in the solution one hour, and then plant them. They will germinate readily, and their vines will not blast, nor their tubers rot." Try it in a small way.

TIME TO COLLECT AND SOW THE SEED OF THE WHITE PINE.

In answer to the inquiry of your "North Brookfield Subscriber," I would say that white pine seed is ripe in the latter part of August, or the first part of September. It should be collected just before the cones begin to open, the cones being laid away in some dry chamber until the seed can be thrashed out, when it should be sowed as soon as convenient, this being the time when they are naturally sown. It is a very good practice to sow on land after having sown winter rye without any covering; or, if sown on old worn-out land, it would be well to harrow the ground previous to sowing. There has been no seed grown in this vicinity for several years.

Pelham, N. H., 1859. B. F. CUTTER.

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WARTS ON A CALF'S NECK.

I have a yearling calf that has got warts on its neck about as large as a quart measure; they have been growing all winter, and now have a very offensive odor. I wish to inquire through your paper, what will prove a remedy.

What is the best thing I can do for lice on my young stock? LUTHER.

Milford, March 7, 1859.

REMARKS.—We cannot tell you what will cure the warts. A little mercurial ointment rubbed upon the cattle with a tooth brush will kill the lice.

—

CIDER VINEGAR—AN INJURED COLT.

Can you tell me of the surest and most expeditious method of making good cider vinegar?

Will you refer me to some treatise on road-making?

I have a colt in perfect health, which has a swelling on his breast, caused, some say, by feeding from too high a crib. If this is not the cause, please state what is, if you know, and the remedy. A. B. C.

REMARKS.—Loudon gives a chapter or two on road-making, in his "Encyclopedia of Agriculture." The other questions we cannot answer satisfactorily.

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A BIG CALF—CORN FODDER.

I had a calf dropped March 14th, that weighed 127½ lbs., and the cow had been kept all winter on corn fodder and meadow hay. I have wintered twenty head of cattle this winter on corn fodder and meadow hay, and they are coming out well this spring.

Some of your correspondents boast of keeping stock on corn fodder and turnips, as a proof of the goodness of turnips. I consider corn fodder a good feed. In fact, I have always noticed that my cows failed in their milk when my corn fodder is out. The fodder from an acre of good corn is worth as much as the average of English hay on the same quantity of land.

I have fed my corn fodder without either cutting, steaming or mealing, and I have no doubt but what it would have been better had all of them been done. ED. EMERSON.

Hollis, N. H., March 19, 1859.

SPLIT BARK ON APPLE TREES.

Can you inform me what I can do to save my apple trees? The bark on many of them is split from the ground to the limbs, and is loosened from the wood, half or more of it on the trunk. About one-sixth of my orchard of ninety trees is affected in this way. S. D. M.

Mansfield, Mass., March, 1859.

REMARKS.—Will some one informed on the subject enlighten us on this question?

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FEEDING FODDER TO STOCK.

In reply to a communication in the *Farmer* of March 19, by a "Subscriber" in Woodstock, Vt., in relation to keeping farm stock, I think if he will cut his hay for cattle and horses, mix his corn and oat meal with it, and feed judiciously, it will not cost more than two-thirds the amount to keep them that it will to feed hay and grain whole.

For sheep, and especially ewes with lamb, I should feed potatoes, (after they become accustomed to them,) at the rate of one bushel to a hundred sheep per day, chopped fine, and a small quantity of corn or oat meal well mixed with them. With me it has proved a saving of hay, and improvement in the condition of the sheep.

South Strafford, Vt. A FARMER.

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CALIFORNIA POTATOES.

From half a bushel of seed, cut small, and three pieces put in a hill, I harvested *thirty-three* bushels of potatoes. They were planted in ordinary ground, 3 ft. 4 in. apart, and 2 ft. 8 in. between the hills. The manure was plowed in; when hoed, they were dressed with leached and unleached ashes and plaster. O. THOMSON.

Jericho Centre, Vt.

—

A FINE NATIVE BULL.

I have a native bull two years old, of fine form, light red color, not fat, only just decent store order; he weighed to-day 1300 lbs. He had the benefit of a farrow cow through the summer of 1857. Since then he has had nothing but grass and hay to eat; he is gentle to handle, and not unruly. LEWIS WARD.

Naugatuck, Ct., March 18, 1859.

—

WARTS ON PLUM TREES.

Has there been any effectual remedy discovered for preventing warts or hard protuberances from growing on plum trees? If so, what is it?

A. R. S.

REMARKS.—We know of none from actual experience. Mr. W. A. Simonds advertises a wash which he says is a remedy.

—

MUCK COMPOST.

"O. N. M.," Warner, N. H., will find many articles in the recent numbers of the monthly *Farmer* on the subject of his inquiries; also, a paper in the Patent Office Report for 1856. The name of the person he inquires for may be seen at the head of our paper.

For the New England Farmer.

HORSE FOOT AND HORSE-SHOEING.

It has been my lot to have two horses spoilt by bad shoeing. On that account I was induced to study the formation and nature of a horse's foot. This portion of the horse, because it outwardly seems to be one solid block, thicker than a driver's skull, and made, therefore, to be battered, without mercy, on roads, paved, &c., contains a mechanism inside that is no less exquisite than those mainsprings of grace which are enclosed in the fine gold watch.

The horny case is lined with plates that are at once elastic and devoid of sensation; thus concussion is broken and blows are not felt. By this admirable combination of solidity and elasticity, the given and most difficult mechanical problem, to wit, the moving of a heavy body with great velocity, is solved. The outside is called the "crust," in England, and in France, the "wall." The front part of the hoof is thickest where the first and heaviest shocks are met, and thinnest at the heel, where expansion, not resistance, is required. The ground surface of the foot is composed of a sensitive sole, which is endued with a power of descent and ascent according to the pressure on it from above, and of the frog, a spongy, but less finely organized substance, which swells at the back part, bulby and well-defined in the unshod colt. The whole use of the frog is an open question; but every one accords to it the most important functions.

It is useless for me to go into the minute part of the foot, but I will say that whenever there is inflammation in the foot, however small, the horse will rest it, to shift the seat of pain. At first the disease does not show itself much, but it is gradual. The spur of the horseman may cause the horse to bear much pain, without flinching, but endurance has its limits. You will find that he steps more carefully, nor does he put his foot ahead, and there is also a lowering of the head and neck to remove the weight from his feet. Nature has formed the foot in the right shape to be shod; it does not need much trimming. In pulling off an old shoe, care must be taken not to wrench the foot nor to injure the external crust of the hoof. Care must be taken not to pare the ground surface too thin; rasp off the rough particles adhering to the crust, but do not pare the frog, as, if it is bared of its slight covering, it is apt to dry up and crack. The rough edges of it should never be removed. It should be left to nature, for the frog throws off its worn-out teguments, like a tree casting off its dead limbs The hoof, in its natural shape, should guide the smith in the selection of the form of the shoe. The shoes should be of equal thickness throughout, with a flat ground surface; shoes with high heels are dangerously absurd; the toe, which ought to be raised, is lowered, and nature's plan reversed, which elevates the point in order to avoid obstructions. The web should be wide, and of the same width throughout; if drawn in at the heel, it exposes the naricular joint, and if that be inflamed, at once you have a lame horse. In putting on the shoe, it should rest only on the horny run of the foot; it must not press on the sole, thereby arresting the springy operations, or encumber the heels, where the crust is thinnest and the power of expansion the greatest. Five small nails for the fore foot and six for the hind are sufficient; large nails make too big holes in the crust. They should be driven into the outer quarter, where the crust is the thickest; not forced in too high, but the points brought out as soon as possible, clenched down broadly, and then not too neatly rasped away, which weaken their hold. The heel and inside quarter to be left free. When a shoe is properly forged, there is no danger of applying it hot to the crust, for the purpose of removing the irregularity of the hoof. S. P.

For the New England Farmer.

HUNGARIAN GRASS---COWS STABLED NIGHTS.

MR. EDITOR:—Having read in your valuable paper something concerning Hungarian grass, I thought I would tell my experience. Last season I procured four quarts of the seed, (paying $1,00.) and sowed it the 2d of July, expecting it to come on as buckwheat or the like, but to my regret, it proved to be three weeks longer maturing. A frost the 29th of September cut it as low as it would melon vines, and I am left minus any seed. It is a query in my mind whether it can be raised and made as profitable as it is said to be, by those that have the seed to sell. That cattle and sheep would eat the straw when it was raised from hay, better than they do oat straw, I have no doubt. But when for the seed, it must be sown so thin that it may fill well, that it would be coarse and hard, rendering it unpalatable to them. After seeing what I saw of it, I should recommend to all who intend to sow some, to buy sparingly, and sow early, and on good ground, noting all its qualities and see if humbug is not in the ascendency.

Will some one inform me through the *Farmer* whether a dairy of thirty cows can be kept in stables nights through the summer months, and do as well as they would in a pasture of eight acres? I have good stables and cellar for the droppings, straw for litter, and hay to feed them, if they will eat it. I want to milk at four o'clock and at six. E. J. BUTTOLPH.

Essex, Vt., 1859.

REMARKS.—We have no doubt but cows are kept through the night, in well-ventilated stables, as comfortably and healthfully as in a pasture, and even more favorably, if there are no sheds in the pasture. The stable should be clean and sweet, and the floor well littered.

LOCKJAW IN HORSES.

This is a terrible malady to which horses are sometimes subject, and it is generally fatal, owing to the want of skill on the part of veterinary physicians. The method pursued by them in its treatment has been blistering, clystering, &c., which rather aggravates than relieves the spasms that usually attend it. Death generally ensues by this practice, and the disease has been held to be incurable. In a late number of the *Edinburg Veterinary Review*, a new system of managing lockjaw is described, and nearly all the cases in

which it has been applied have resulted favorably. The plan consists of a hot water packing, similar to that pursued in the "water cure" for the *genus homo*. As soon as the horse is observed to be affected with tetanus, it is wrapped from head to tail in four or five pairs of blankets, which have been wrung out of warm water at a temperature of two hundred degrees Farenheit. The animal is then allowed perfect rest and quietness for about two hours, when warm water of the above temperature is poured along its back outside of the blankets, and another like period of repose is allowed, and so on till a cure is effected. A thin gruel of flour, oat, or Indian corn meal is given, when the jaws of the animal are capable of being opened. As horses are liable to take lockjaw from pricks in the feet, caused by careless or unskillful blacksmiths while shoeing them, this simple method of managing the disease can be applied by any person, and is well worthy of trial.—*Rural New-Yorker.*

For the New England Farmer.

THE PINES OF NEW JERSEY.

MR. EDITOR:—A vacation well spent gives rise to agreeable memories long after we have returned to our accustomed duties of every-day life. A visit to that mysterious and historical region, "The Pines of New Jersey," had been contemplated by us for many months; for we had heard of the good farming prospects which have already induced many sons of New England to settle there; and wishing to investigate the feasibility of settling with some friends where lands are cheaper than at home, we left this city during the month of July for the "Pines of New Jersey." While transferring our baggage to the Camden and Amboy railroad depot, in New York, the round face and stout form of Capt. Bluff, an old acquaintance, suddenly confounded us. The huge "flippers" of the old sea-dog half-squeezed the life out of us, as he cordially grasped our hand, and inquired, "Where are you bound to?" And after learning our destination, the jolly captain made us follow him to the beautiful schooner that he commanded, which was to sail that very afternoon for Tom's river, on the east coast of New Jersey. The captain would not take any refusal to his invitation that we should accompany him in the Mermaid, and that night, with a fine breeze on her quarter, the fleet vessel was leaving Sandy Hook at the rate of ten miles per hour.

After entering Tom's river, we bade farewell to the captain, and engaged a collier to take us through the Pines to the open country beyond. We are now abruptly entering on new ground—a few words regarding this interesting and much-talked-of region. During the revolutionary days the Pines were infested by the tories, who often made incursions to the settled country in this vicinity, where they robbed and murdered to their hearts' content. The rebels often followed the retreating scoundrels into the fastnesses of the forests where fierce battles were fought with the tories. The Pines received a bad name because they were the home of these lawless people, and though the tory has long since gone to his judgment, still the prejudice against this region has not been removed. There are really good tracts of land all through the Pines, which until lately have remained valueless; and even now a farm may be bought at the lowest Western landholders' prices. Not the heavy soils of the West are to be found here, but good light soils, varying from four to twelve inches in depth, with a fine warm subsoil of sand, just such as your Cambridge market-gardener would select. These soils are much more easily worked, and are earlier than Western lands.

Early in the morning the collier called for myself and baggage, and soon after we were in the midst of pine forests. An hour later and we had emerged upon a plain, leaving the forests behind us. For miles in all directions the woodman's axe had been busy, for scarcely a tree could be seen—all the wood had been turned into charcoal by the industrious colliers. By eleven o'clock we had again entered the forests of yellow pine, and my sooty driver informed me that we were on the Hanover Furnace Tract, one of the largest landed estates in New Jersey. About this time we observed men at work throwing out a fine sort of white clay—so white, indeed, that one might mistake it for chalk. It was Kaolin, decomposed feldspar. The owner of this spot had purchased seventy-five acres of sandy land for a few dollars per acre, and informed us that after raising the Kaolin, a neighboring glass manufacturer had offered him five hundred dollars for two acres. The finest china ware has been made from this indestructible clay, and a dentist of Trenton has made teeth out of it for his customers. No blast from the chemist's lamp can melt this clay. Mr. Niel, the owner of the farm upon which it was discovered, sends the clay to New York, where he gets twenty dollars per ton for it. Another hour's ride brought us to a tract of hazel loam covered with oaks. "Where are we now?" I asked of our collier; "On the Hanover Furnace Tract," he replied. In we drove, and coming to a farm-house, stopped to rest our horses, and there we were again told that we were still on the great Hanover Furnace Tract. We drove ten miles further, and met a party of persons who were surveying a cedar swamp. We asked the principal of the party upon whose tract we were travelling, and the old reply came back, "The Hanover Furnace Tract." Upon further inquiry we learned that the surveyors lived upon the tract, and were employed by the proprietors, "year in and year out."

Another ride of four miles brought us to the shores of a beautiful little lake, upon the banks of which some thirty houses were embowered in the shade of gigantic willows and tall pines. Here lives, in retirement, one of the proprietors of this great tract, which contains over seventy square miles; no low-class tavern offended the eye, but all was quiet, simple, and beautiful. The sun was sinking behind a heavy pine forest, and his softened rays, reflected upon the little lake, caused it to look like burnished gold. The proprietor, Mr. Samuel H. Jones, came out to meet us, and at once extended the hospitable honors for which, I have since learned, Hanover Furnace is celebrated. We passed a happy evening at the mansion, and when we asked Mr. Jones why he did not offer his lands to settlers from the North, he told us that his lands were oper

for examination, but he would not sell to any person unless they were well satisfied that they could do better here than elsewhere. He despised all methods of land speculation, and he wished to have only temperate, energetic men of good character settled around him. For nearly one hundred years this great tract has been owned by his family. It was purchased in the days when land was valueless. The Jones's title to their land came from the original appointed proprietors—almost direct from the crown. Thus they can sell their lands at ten, twelve, and fifteen dollars per acre. Large, natural cranberry meadows are scattered over the tract. One man had purchased a cranberry meadow containing one hundred acres for eight or nine hundred dollars; the first year's yield was two hundred and seventy bushels, bringing him some seven hundred dollars. At Hanover Furnace there are saw-mills and a grist-mill, besides the Furnace for iron castings. Lumber—pine sell at from twelve to sixteen dollars per thousand feet, cedar about the same. Hanover Furnace is thirty-five miles from Philadelphia, forty-five from New York. From the latter city it is reached by the Camden and Amboy railroad to Bordentown, from thence to New Egypt by stage. The postoffice is at Pointville. I send you this sketch, hoping that it may benefit some of our New England people. Let our young farmers go to New Jersey, where no fever and ague prevails, taking with them the *New England Farmer*, and they will succeed far better than they will at the West.

Boston, March, 1859. B.

NEW ENGLISH PEAR.

F. J. Graham, Esq., F. R. S., of Cranford, Middlesex, brought a seedling called Graham's Bergamot, which was considered the most delicious seedling pear that had ever been brought under the notice of the Society [British Pomological.] The fruit was medium size, very obtusely conical; an average fruit measuring two inches and a half in its greatest diameter, longitudinally and transversely; stalk short, stout; color dark russety-green, purplish on the sunny side, inclining to pale cinnamon as it ripens; texture very melting and juicy; flavor rich, aromatic and very sugary.

Mr. Graham subsequently sent the Secretary specimens of leaves and wood; the former are small, not exceeding two inches and a half in length, nor one inch in breadth, very delicate in substance, and much serrated, the foot-stalks being nearly as long as the leaf itself, and very slender. The latter is very pale in color, slender but firm and very short-jointed. Mr. Graham states it to be very hardy and free from canker, and that its habit of growth is very upright, producing abundant blossom buds—the tree naturally forming a perfect pyramid or cone.—*English Cottage Gardener.*

HINTS TO FARMERS.—Toads are the best protection of cabbage against lice. Plants when drooping are revived by a few grains of camphor. Sulphur is valuable in preserving grapes, &c., from insects. Lard never spoils if cooked enough in frying out. In feeding corn sixty pounds ground goes as far as one hundred pounds in the kernel. Corn meal should not be ground very fine, it injures the richness of it. Turnips of small size have double the nutritious matter that large ones have. Rats and other vermin are kept away from grain by sprinkling garlic when packing the sheaves. Money expended in drying lands by draining or otherwise, will be returned with ample interest. To cure scratches on horses, wash their legs with warm soapsuds, and then with beef brine; two applications will cure the worst case.—*Ohio Farmer.*

For the New England Farmer.

CULTIVATION OF CELERY.

MR. EDITOR:—Some time last season I noticed an appeal made to your valuable paper for information respecting the cultivation of celery. I thought I would give you my method of cultivating this delicious plant. In the first place, I go to the pasture and dig a quantity of turf from the bushy spots, laurel beds if there be any. Then collect any old rubbish that will burn, and with this I burn the turf until it will pulverize. This destroys all foul seed, the eggs or larvæ of insects, and provides a mould which has not been exhausted. I mix this with fine rotten manure, two parts mould to one of manure. After making my hot-bed in the usual manner, I put on five or six inches of the mixture, then sow the seed, and never allow the plants to grow nearer than three inches of each other. Thus provided with strong healthy plants, I trench as early as the season will permit, eighteen inches deep, clearing from the trench all soil that may contain foul seed, and fill up six inches with the mixture of burnt mould and manure. In this I set the plants, hoeing often, and watering if the season be dry. When the plant is eight or ten inches high, I begin to fill moderately with the burnt mould without the manure, preferring to give the plant the benefit of the light and air, until the middle of August, then fill up with the mould, and continue to do so until the crop is matured.

To keep for winter, dig a trench at least three and a half feet deep, in a light, sandy soil, where there is no danger from water; in this put the plants with the top down, leaving an open space below this to be covered, but not so deep as to keep it too warm, and let the temperature be as low as possible, and not be in danger of freezing. In this way it may be kept in fine order until spring. MECHANIC.

Westboro', March, 1859.

TOMATOES.—Now is the time to start the tomatoes. The women can do it in the house.—Take any old box, bucket or pan, place some coarse horse manure on the bottom, and fill with rich loam. Set it in the sun for a day or two, keeping it properly moist, until the whole mass is warm, then sow your seeds. After they have come up, do not let them stand crowded, as a few vigorous plants are better than many weak ones. See that they are always kept properly moist, and you will get an abundance of stout, healthy plants.

For the New England Farmer.

POTATOES---SEEDING---WHEAT, &c.

MR. EDITOR:—Is it not a fatal error, that the farmer is a little too economical in seeding with small potatoes, instead of large ones, when he is so unsparing in his cash outlays for all other good seed, and especially, of some new and unknown variety? Here, on Long Island, potato-growing is reduced to a science. We have many farmers who sell from two to seven thousand dollars value a season. This constitutes the principal crop of the farm, with the exception of the Swedish turnips, which are transplanted after the early potato crop is taken off. They plow in horse manure, and plow deep; select their largest potatoes for planting, cut off, and give to the pigs, the cluster of eyes, called the seed end,* (on the long varieties,) such as Jenny Lind, Chenango, Long Reds, &c.; by doing this, they get no small potatoes, and as many pounds as if the whole were planted. They say, the body of the potato contains the large, healthy germs, (which must be self-evident to all farmers,) and ridicule the idea of planting "pig potatoes" to realize from. This would seem to be a common sense view of the matter. They plant a quarter of a large potato two feet apart, and want only three to four stocks in a hill. This practice of planting and cultivation was satisfactorily proved to me, by going into a field of fifteen acres, where several men were digging, and scarcely a pig potato could be seen—but on the contrary, large, marketable potatoes, which required no sorting.

Now, that nothing may be lost, and a fair experiment may be tried, I would suggest that these small eyes be planted in separate rows. The trial will cost nothing, and may turn out to be a valuable discovery. Last year, the potato discussion terminated (as I thought,) in favor of large seed for planting. Yet, several of your correspondents made a fair showing for the pigmy family. The last few years of my own farming convinced me, that planting small potatoes from year to year, was the sure dwarfing principle. The bins in my cellar bore evidence of the fact. I am delighted to learn, that your farmers in various sections of New England are trying the wheat crop. Take your warm uplands for spring sowing, and your strong grass sward for August sowing, and there will be a sure necessity of increasing your grist mills at home. Four bushels of wheat is worth, in every family, a barrel of flour—worth remembering. Our spring opens in earnest, the green grass and swelling lilac buds even to leaf, would seem to have bidden the winter good-by. Time will develop, whether "Winter's back is broken", or to return again with its frosty night-cap—we hope not! H. POOR.

Brooklyn, L. I., 1859.

* Many farmers think the potato will not produce, without the "seed end."

HUNGARIAN GRASS.—We continue to have inquiries in relation to this grass. All we can say of it is, that we receive contradictory statements as to its productiveness, that it is somewhat doubtful whether it will ripen its seed in all parts of New England, that it is an annual, requiring to be sown every year, and that our friends had better purchase the seed sparingly, and only sow small patches of land for experiment.

For the New England Farmer.

CARROTS---MANGOLDS---ASHES.

MR. EDITOR:—Though our farms are now covered with snow from two to four feet, according to location, yet we expect in due time to have an opportunity to plow our land and put in the different kinds of seed, and I thought if I had a little more information, (which I have no doubt you can give,) I shall know better what proportion of different crops to try to raise. In the *Farmer* of January 8th, you give a very interesting table of the comparative value of the different kinds of fodder, but you said not a word about "carrots," a crop that I have entertained a higher esteem for, than for any other root crop for stock that I have ever raised, not excepting the potato. Please inform your readers of the relative value of this crop, according to the basis in the table already given.

I noticed in a late number of the *Farmer* an inquiry if ashes exhausted the soil? Although I thought your reply hit well "the merits of the case," I will just relate an incident in regard to that subject that came under my personal observation.

In the summer of 1849, on a farm in Avon, Ct., the proprietor showed me a place in his field where he said twenty years before, he hauled out leached ashes after making soap, and spread them on, like manure. At the time I speak of, there was a well defined edge to the part where the ashes were applied, the land producing perhaps double the grass that grew all around it. The soil was a dryish, sandy loam, and had long been under cultivation. A. M. BRAINERD.

Alexandria, N. H., March 10, 1859.

REMARKS.—You are not mistaken, we think, in your estimate of the value of the carrot, but we have no table at hand to show you its relative value with other fodder.

For the New England Farmer.

TOP-STALKING OF CORN.

Having noticed some discussion lately in the *N. E. Farmer* respecting the utility of cutting corn stalks, I thought that the following statement of Mr. SOLON CARTER, of Leominster, to the Worcester North Agricultural Society, published in the Abstract of Returns of the Agricultural Society of Massachusetts, 1856, (pp. 246, 247, note,) might perhaps be both new and useful to the readers of the *Farmer*. I am inclined to think, that in many cases, old practices, upon sufficient examination, will be found to have much of reason in them. Even pruning fruit trees in spring; for why should a wound made by removing a limb and covering the same with grafting-wax or other protection, not heal well and soundly, at the same season that a graft most readily unites with the stock? But for Mr. Carter's statement.

"Each of the three lots contained four rows,

of twenty-four hills each; in all ninety-six hills. Lot No. 1, was cut at the ground and stooked Sept. 24. Lot No. 2, had the top stalks cut in the usual way, at the same date. Lot No. 3, was left standing whole until October 29, when each of the lots was harvested and husked. The ears were then spread about six inches deep, and remained until Dec. 20. At this date the whole was shelled, and the result is as follows:

	Lot No. 1. Cut up whole and stooked Sept. 24.	Lot No. 2. Top stalks cut Sept. 24.	Lot No. 3. Left standing whole.
Oct 2. harvested, weight,	143 lbs.	155½ lbs	154 lbs.
Dec. 20, shelled, corn we'd,	111 "	131 "	125 "
Cobs weighed,	16 "	18 "	17½ "
Total,	127 "	149 "	142½ "
Shrinkage,	16 "	6½ "	11½ "
Per cent. of shrinkage,	13	4	8

"It appears, by this experiment, that the corn hich was stooked weighed *least* at harvest and *shrunk most* before shelling, while that which had the top stalks cut, weighed *most* at harvesting, and *shrunk least* before shelling.—*Secretary of the Society.*"

Perhaps it may be proper to say that all the lots, in other respects, were cultivated alike.

Boston, February 22, 1859. D.

REMARKS.—There is a great difference between cutting off a limb near its termination, where it is small, and where but comparatively little sap is flowing—being scattered into all the branches and twigs in its neighborhood—and cutting it off close to the body of the tree. If you were to cut off the first joint of a finger, the danger of bleeding to death would not be so great as it would if the leg were cut off at the thigh! A skilful operator leaves what are called *leaders*, when grafting, to take up the flowing sap and divert it from the limb that is cut off. These leaders are vigorous limbs that spring from a larger one just back of the one that is cut off. But even with this care, and that of covering the wound with grafting wax, they will sometimes bleed and decay. The scion itself, although so small, also takes up and disposes of considerable sap.

KEEP THE BOYS AT HOME.

In the circuit court of Chatauque county, N. Y., says the *Springfield Republican*, eight or ten young men were sentenced to the penitentiary for theft, burglary and other crime. Before passing sentence, Judge Marvin inquired of each his birth-place, occupations, and the temptations that had led him into vice. All of them had been brought up farmers, and had gone to teaming, or into taverns, or some other business exposing them to temptation, and had learned to drink, swear and use tobacco, and so began their career of crime. Having finished his address to the criminals, the judge turned to the spectators and said:—

"Before sentencing these boys I have a few words to say to the men of Chatauque county, the agriculturists in particular, some of whom are here to-day looking on the saddest scene it has ever been my lot to witness in this county; so many boys, farmers' sons, too, all of them to be sent to the penitentiary for stealing and burglary. Farmers of Chatauque county, when your boys get large enough to work, find work for them at home; on no account let them go into the city or village to work; nor let them go to teaming; I care not if they can get fifty dollars per month, it will be a dead loss. They will just as surely follow the example of these boys, now before you, as they leave the sacred and restraining influences of home. Give them plenty of good books, and papers, make home pleasant, and keep them there until they are of age and have the wisdom to resist the temptation of the high wages on the road or in the tavern, but obtained at the expense of good character."

For the New England Farmer.

AGRICULTURAL PROGRESS THE BASIS OF HUMAN PROGRESS.

MR. EDITOR:—When the time comes, which is foretold by the prophets, "when the swords shall be beaten into plow-shares, and the spears into pruning-hooks"—when universal peace and harmony prevails, and "righteousness cover the earth as the waters do the sea"—*then* will the interests of mankind become associated; then the whole earth will be one great mammoth association. Our Saviour has said, "for where your treasure (or interest) is, there will your heart be also." Therefore, those who act voluntarily, are governed and controlled by what they deem to be their interest; and this interest or treasure, is not confined to money—to dollars and cents; but is that which is anticipated to produce pleasure and happiness. None but the slave can be said to exercise or do a disinterested act. Isolated and antagonistic interest is the source or germ of all the contentions, wars and crimes extant on the face of the earth—is "the *sin* of the world." Isolated labor is, for the most part, unproductive, discouraging and unprofitable. Associated interest and labor levels the mountains—fills up the valleys—makes the rough places smooth; and, by it, "all flesh shall see the salvation of God." By it a "highway is cast up for the ransomed of the Lord to walk in,"—by it the iron horse moves through the length and breadth of the earth—by it the manufacturer has made his fabrics plenty and cheap. Most of the great enterprises of the day, in the arts and sciences, are accomplished by associated interests and labor. Almost every useful commodity is made plenty and cheap, except our bread and butter, our beef and pork and cheese! That which constitutes the life of man is as scarce as ever—as hard to be obtained as it was sixty or a hundred years ago! This is not a right state of things. Make the necessaries of life plenty and cheap, to correspond to the productions of the manufacturer.

Agriculturists are the foundation, the bottom strata of the whole superstructure of human society, and so long as they remain in their isolated and antagonistic condition—laboring single handed, with their few imperfect implements, trying to force a few bushels of grain from a sterile soil, without system, without adequate knowl-

edge, so long a portion of mankind will feel the curse of hunger, which breaks through stone walls.

In the New England monthly *Farmer* for January, 1859, I have read a communication from the pen of Mr. Wilson Flagg, which advances, I think, some erroneous ideas in regard to the effect which the steam-plow will have on the agricultural interests of the country; and the creation thereby of "great mammoth agricultural associations," which will absorb the whole of the faming interests, farmers and all! Would to God that this may be the result; for then we might have hope for the permanent regeneration of mankind, when all the farmers are formed into one *great mammoth agricultural association*. Then *all* will be rewarded according to their works—*all* will be free. No more slaves, not even to those great machines, Br. Flagg to the contrary, notwithstanding—for the farmers are now slaves to the small implements. But I hope the great machines will make them *free*. "*God speed the plow!*" even the great STEAM PLOW!

Ripton, Vt., Feb., 1859. SAMUEL DAMON.

AMERICAN WEEDS AND USEFUL PLANTS.

That person who learns and retains the names of the machinery which he drives, or the tools or implements which he uses in his business, will be able to converse more intelligently about it, will naturally investigate its nature and scope, and will be quite likely to *make it more profitable*, than one possibly can who is indifferent in regard to it.

It is so with the farmer. He who has studied the names of cattle, who can select an Ayrshire, Alderney, Short Horn or Devon, at sight, from a promiscuous herd, and tell why each bears that special name, will usually be found to have gone beyond that point of inquiry, and has also learned the comparative merits of each, so that when he wants an animal he knows just where to select, either for the dairy, the shambles or the yoke. The knowledge of names leads to the acquisition of other knowledge which becomes *actual capital* to the farmer in his business; it makes up a sound judgment to guide him in his purchases and sales, and its exercise protects him against the imposition of unprincipled men.

With regard to machinery, stock, and the implements of the farm, we have already valuable helps. There are several works on cattle, and the catalogues of the agricultural warehouses give illustrations and descriptions of tools and implements, — while there are more scientific works that describe the more complicated machinery, such as wind, horse and steam power.

What we have said above is intended to illustrate and enforce what we have to say to the farmer in regard to his knowledge of the names of the plants which he cultivates, and of those which he wishes to destroy. He certainly will derive both satisfaction and profit from a better acquaintance with their names; and this will lead —as in the case of the cattle—to a better understanding of their structure, habits and growth, and consequently to larger *profits*, because he will better know how to manage them.

Now we have a work before us, and one that we have long desired to see, upon the *American Weeds and Useful Plants*, being an illustration of Agricultural Botany, and enumerating and describing the useful plants and weeds, which merit the notice, or require the attention of American agriculturists.

As as illustration of the practical character of the work whose title stands at the head of this article, we will quote what it says of one of the plants common all over New England, and denounced every year as an intruder, fit only to be steeped in vinegar and applied to the face to cure a fit of ague or the mumps! It is the common mullein. We will give the author's whole account of it, so that the botanist shall not feel slighted, and that the common reader may see that even the despised Mullein has extracted from the scientific a great many queer and hard names. Thus—

VERBAS'CUM, *L.* MULLEIN.

[Quasi *Barbascum*; Latin *Barba*, from its bearded or woolly habit.]

Calyx 5-parted. *Corolla* with a very short tube; limb sub-rotate, 5-lobed—the lobes nearly equal or the front one larger. *Stamens* 5, unequal, inserted on the tube of the corolla, declinate, exserted,—the *filaments* (or some of them) bearded. *Capsule* ovoid or globose. *Seeds* numerous, rugose-pitted. Tall and usually woolly biennial *herbs*, with alternate *leaves*, those of the stem sessile or decurrent. *Flowers* in dense spikes, or paniculate racemes.

V. Thap'sus, L. Stem simple, erect, tomentose; leaves oval-lanceolate or oblong, very woolly on both sides,—the cauline ones decurrent; flowers in a dense terminal spike; 2 lower filaments smooth.

THAPSUS VERBASCUM. Mullein. Common Mullein.

French, Bouillon blanc. *German*, Das Wollkraut. *Spanish*, Gordolobo.

Whole plant pale grayish-green or hoary tomentose,—the pubescence much branched. *Stem* 3-6 feet high, rather stout, leafy, rarely branching unless injured. *Radical leaves* 6-12 inches long,—the cauline ones smaller. *Spike* cylindric, 6-12 or 15 inches long; *flowers* bracteate *Corolla* bright yellow. *Stamens* unequal,—the two lower ones longer, with smooth filaments.

Neglected fields; road-sides, &c.: introduced. Native of Europe. *Flowers* June-July. *Fruits* August-September.

Obs. This plant, although abundant in all the older settlements, is undoubtedly a naturalized foreigner. It is a worthless, unseemly intruder, in our pastures and cultivated grounds. There is no surer evidence of a slovenly, negligent farmer, than to see his fields overrun with Mulleins. As the plant produces a vast number of seeds, it can only be kept in subjection by a careful eradication while young—or at least before the fruit is mature. When neglected, the soil

soon becomes so full of seeds, that the young plants will be found springing up, in great numbers, for a long succession of years.

Beside the common mullein, there are two other kinds, the Moth Mullein and the White Mullein. The latter is a tall plant with a thin, powdery wooliness. and yellow (sometimes white) flowers

What farmer would not value a book giving him a definite and reliable account of every plant growing on his farm in the manner in which this is given! Some of the terms used in describing it may be difficult to comprehend at first, but with a little care they would soon become familiar. But there is usually enough in plain English to enable us to find out the names of unknown plants, and to explain those whose names are common to us.

The work is by Dr. WILLIAM DARLINGTON, with revisions and additions by GEORGE THURBER, Professor of Botany in the N. Y. College of Pharmacy, and we understand is approved by Prof. GRAY, of Cambridge, whose "Analytical Key to the Natural Orders" he has permitted the author to use. It is published in the neat and attractive style of A. O. MOORE & Co., Agricultural Book Publishers, 140 Fulton Street, New York. It will become one of the most gratifying and useful books we have.

For the New England Farmer.

RUNNING WATER---NATIVE STOCK.

Many are the farms that are not supplied with running water. Such was mine ten years ago. Thinking that by means of a syphon I might save the expense of pumping for my stock of cattle, I dug a well twenty rods above my barn, and twenty feet deep, the bottom of the well being on a level with the trough at the barn. The pipe was half inch, laid four feet from the top of the well, and run to the bottom; the remainder of the pipe laid so as to be secure from frost. These ten years it has worked admirably; as good today as ever. The cost of it was about fifty dollars. Now there are a multitude of places in New England, as well situated to obtain water by this means as my own, which when obtained, the owners would not part with for many times the cost.

In the March number of the *Farmer* is a report of the Third Legislative Meeting, at which time was discussed the best stock for general farming purposes. The reports of these meetings, (although there is a great diversity of opinion,) are generally very interesting and profitable to me, and I am prepared to believe pretty large statements—but there is one, made by Mr. DAVIS, of Plymouth, in relation to native stock, which is a little too large for me to credit. There must be some mistake. The statement is this. "Four pounds and a half of the milk from a cow of a friend of his had yielded one and a quarter pounds of butter." Now this is far beyond what Mr. Buckminster ever claimed for his favorite Devons. Allowing a quart to weigh two and a quarter pounds, it gives but two quarts, for one pound and a quarter of butter. Such a statement ought not to pass unnoticed. C. E. FISKE.

Natick, March 12, 1859.

THE STATE FARM.

On Wednesday, March 30, the State Board of Agriculture made a formal transfer of the State Farm at Westboro', to the Board of Trustees of the Institution, with all the stock—some forty head—fodder, grain, implements, &c. &c.

We had the pleasure of going over a portion of the farm with the members of the Executive Committee, and looking at some of the improvements which had been commenced or completed by the Board. One experiment in draining, under the special direction of Hon. B. V. FRENCH, is well worthy the observation of those who intend to engage in that particular item of farm progress. Another in *trenching*, is a work of considerable magnitude, and the results from it so far are encouraging. Some five or six acres of land almost covered with rocks, hummocks and bushes, have been thoroughly trenched by the boys of the Institution to the depth of eighteen inches, and now lies as mellow as a garden bed ready for spring seeding.

The Hon. JOHN BROOKS, of Princeton, has acted as Chairman of the Superintending Committee, and no man could be more constant, faithful and persevering in the discharge of the duties which have devolved upon him.

The head farmer, SAMUEL N. WHITE, Esq., after a six or eight years' residence upon the State Farm, has returned to Brookfield to soothe the declining years of aged parents, and to settle once more in the home of his youth. These he thought paramount objects, and declined longer to remain in the service of the State. His duties at the Farm have been arduous and unremitting, and he has discharged them with an ability, zeal and fidelity which reflect as much credit upon himself as they have been valuable to the Board. Beside his responsibilities as farmer, his clerical duties have been nearly as arduous as those of a counting-house clerk, in keeping the accounts of the farm and the numerous experiments which have been instituted. He carries with him our hearty wishes for the continued health and prosperity of himself and his intelligent and cultivated family.

THE AGES OF TREES. — The Newburyport *Herald* says that among those trees whose ages have been ascertained, the elm has been known to live more than 350 years; the chestnut, 600; the cedar, 800; the oak, from 1000 to 1500; and some of the woods of the tropics for 3000, 4000 and 5000 years.

SHORT HORN DOUBLE DUKE.

OWNED BY THE HARVEST CLUB, SPRINGFIELD, MASS.

DOUBLE DUKE was bred by J. M. SHERWOOD, Esq., of New York, calved June 6th, 1856, and is of a roan color. His pedigree may be traced back distinctly to the year 1739. We are enabled to present this beautiful portrait of one of our best breeds of neat cattle to the reader, through the kindness of Mr. Secretary FLINT, who very properly prefaces the Sixth Annual Report of the Massachusetts Transactions with it.

A particular description of this breed of cattle is not deemed necessary here, as it is often alluded to and discussed in these columns.

For the New England Farmer.

PEARS---ORCHARD CULTURE.

As regards the pear for farm culture, I feel assured that the hardy fall and winter cooking varieties will give the best returns in sales. There is standing in Salem a large pear tree which is at least forty years old, bearing annually, good crops. That of 1847 sold for thirty dollars. This variety is Rushmore's Bon Chretien, a native; late fall or early winter fruit, much cultivated on Long Island, for the market. Of Uvedale's St. Germaine, or Pound, Black Pear of Worcester, Catalac, Chelmsford and Vicar of Winkfield ,we should say with the late Robert Manning, that "the extensive cultivation of these sorts in large orchards, would produce greater and surer income for the capital employed, than any other investment."

The best varieties of pears for culture generally, are those that have originated in our own country, and in the more temperate or colder latitudes of Europe. Thus we should commend our fine American seedlings; they are generally hardy, and of thrifty growth. Among the large collection of pears which have from time to time been introduced from abroad, only a small proportion, *comparatively*, have proved of good quality in Massachusetts; a variety may be called *first-rate* in our country, and second-rate in Europe, and *vice versa*. The Bartlett, called in England, William's Bon Chretien, is there second-rate; we, on the contrary, (taking into consideration its productiveness in almost all soils, as well as the quality of the fruit,) consider it one of the best for cultivation. The Beurre d'Aremberg is with them a first-rate winter fruit for culture; with us, (from its uncertainty in ripening, as well as bearing,) it has disappointed most cultivators in Massachusetts. I should infinitely prefer such fine winter eating pears as the Winter Nelis and Lawrence. J. M. I.

Salem, Mass., 1859.

MILKING YOUNG COWS.—It is said that young cows, the first year they give milk, may be made, with careful milking and good keeping, to give milk almost any length of time deemed desirable; but that if they are allowed to dry up early in fall, they will, if they have a calf at the same season, dry up at the same time each succeeding year, and nothing but extra feed will prevent it, and that but for a short time.

For the New England Farmer.

WATER POISONED BY LEAD.

EDITORS OF THE FARMER:—Having noticed an inquiry in the *Farmer*, as to the probability of water becoming poisonous to stock by passing through lead pipe, I beg leave to offer the following remarks:—Lead, while it retains its metallic form, is not poisonous, but it may be readily converted into the various salts of lead, some of which are energetic poisons, especially the carbonate; it does not affect all animals alike, nor the same animal alike at all times, as in the case of painters, who all inhale the vapors from white lead, (carbonate;) but it does not affect them all alike, many of them no at all perceptibly, as it depends on the diathesis, or habit; and it is so with all animals.

Distilled water—air and carbonic acid being excluded—does not act on metallic lead; but admit them, and it readily corrodes the lead, and the carbonate is the result. Rain water, or any of the soft waters, are more apt to become poisonous than well water, or the so termed hard water. The quality called hard in water is derived from the presence of the earthy salts they hold in solution, most frequently the sulphate of lime, which impairs the formation of the carbonate of lead, or if it is formed converts it into the sulphate of lead, which is inert; as in cases of poisoning by lead, sulphuric acid is used as an antidote, rendering the lead inactive by converting it into the sulphate.

Mr. BRAID states that the miners at the lead hills, Lanarkshire, never have the lead colic until they work in the smelting furnace, (the ore is the sulphuret,) and LIEBIG says the lead colic is unknown in the white lead manufactories in which the workmen use sulphuric acid.

Therefore it seems to depend on the character of the water, whether it becomes poisonous by passing through lead pipe. Lead may, and doubtless does, (by being introduced in small quantities, but constantly, for a long time,) become the remote cause of serious and destructive diseases; it impairs the function of digestion, lessens the force of the circulation, constringes vessels as absorbents, exhausts arteries, &c., lessening their caliber, and finally deranges all the functions of the body, and it becomes a system of rusty, imperfectly working machinery, producing morbid matter, instead of healthy blood, suitable to build up and sustain the constantly wasting system on the one hand, and in a measure ceasing to throw off the effete matter on the other. By change of diet, as being turned out to grass, a horse, for instance, may gradually recover his normal condition, or if gone too far, he is taken sick and dies, perhaps of congestion of bowels, typhoid fever, or something of that sort. These phenomena have a cause. Some of the worst forms of diseases we meet, we are told are caused by a morbid habit of the body and this habit has a cause. It may proceed from various causes, the gradual introduction of lead into the system being one of them.

In the case of your inquirer, in the absence of other probable causes of the bad condition of his stock, I should think his suspicions of the lead were likely true, and I would advise him to make the thing sure, to call a veterinary surgeon, take his advice, act upon it, pay him, improve his stock, and my word for it, it will be a money-making operation all round.

OREN H. FLAGG, *Veterinary Surgeon.*

Boston, March 30, 1859.

For the New England Farmer.

THE FARMER'S GIRL.

The Farmer's girl leads a happy life
As she trips o'er the grassy lawn;
With an eye as bright and a step as light
As that of the agile fawn.

The farmer's girl is a merry maid,
With cheeks of a rosy hue;
She sits on the stile, a sweet sunny smile
Darts out from her eye so blue.

There's a magic in her winsome voice
That "drives dull care away;"
She can scrub and scour, or at evening hour,
The sweet-toned harp can play.

She would grace the halls of a mansion high,
Or the porch of a lowly cot;
She will make the home of her chosen one,
A most delightful spot.

Young men! choose a wife 'mong the farmer's girls,
If happy in life you would be;
They are gentle and kind, just to your mind,
Sing! A Farmer's Girl for me. KATE.

Hill Side, April.

For the New England Farmer.

PIGS AND GIRLS.

MR. EDITOR:—In a recent *Farmer*, your correspondent, "Rockingham," tells us of a fine pig nine months old which weighed 320 lbs. when dressed. A good pig that. But Old Cheshire gets up bigger pigs than that. I suppose you know that she is famous for her big oxen, good hotels, handsome girls—and fat pigs.

Mr. George Thacher, of this town, slaughtered two pigs, the past winter, eight months old, which weighed when dressed, one 377 lbs., the other 337 lbs. Mr. Thacher is a man who understands what he is about, and what "pays;" and knows that other folks besides "millers" have a right to fat hogs. I suspect that it is all owing to his being a regular subscriber to the *Farmer*.

Mr. Russell, another of my neighbors, slaughtered a pig eight months and twenty days old, that weighed when dressed 376 lbs. These were fattened on corn meal, with a little rye at the last.

Now, Mr. Rockingham, please just take that feather out of your cap and pass it over to old

CHESHIRE.

Marlboro', N. H., March 28, 1859.

THE WHEAT CROP.—The Detroit *Advertiser*, after conversing with parties in different sections of the State, comes to the conclusion that the wheat crop never looked so promising at this season, as it does now. The Rochester *Union* is informed by old farmers of Western New York, that the growing wheat is now forward, and is looking remarkably well. It has suffered little or none from the winter exposure. The Cincinnati *Gazette* says reports of the wheat crop continue favorable.

ELEVENTH LEGISLATIVE AGRICULTURAL MEETING.

[Reported by John C. Moore, for the N. E. Farmer.]

Owing to the House of Representatives having occupied their Hall on the evening of Monday of last week, the usual agricultural meeting was postponed until the evening of Wednesday, when it was held in the Green Room of the State House—the Legislature being at the same time in session. The attendance was not so large as could have been desired—particularly when such an important question was under discussion, viz.: "*The best means to be adopted for the improvement of the farming of New England.*" His Excellency, Gov. Banks, was present during part of the evening.

Hon. Josiah Quincy, Jr., occupied the chair. He said, substantially, that the question was a very comprehensive one. Two points were obvious—the necessity of giving the farmer information, and the necessity of getting him to take advantage of it. Much of the information, however, we had in this country regarding farming was copied or stolen from English works, written by men who were not really farmers, but gentlemen who made farming a recreation. Those who did work on the farms were a very different class—laboring under great social disadvantages—and little better in many respects than the slaves of the South. They had no interest in the soil, or hope to have any. It was different here, where the farmer was the owner of the soil, and where he had a consequent interest in it. Such a man could not believe in English farming instruction; and the best way with him was to convince him that his profession was an honorable and a profitable one. This would be one great means for improvement; and farmers *on principle* would be the most valuable men we could have. A good farmer could live on very small capital, and his position would be found to be the most eligible in the country. Young men had been taught to look on the history of the late Amos Lawrence as a pattern of instruction and suggestion; but few who knew the real history of the man, and of his trials, could fail to know that his life was, though an honorable one, far from being a happy one. It was a gross mistake to advance the doctrine that it was advisable for young men to leave farming, and its happy circumstances, and dive into the troubles of a business life; and the more that could be done to prevent this folly, and to convince young men in the country that the farmer's position was the most peaceful, healthy, honorable and covetable, the more would be accomplished for the improvement of farming. Many young men were literally putting their hands to the plow, and every inducement should be held out to them not to turn back.

Mr. B. V. French was of opinion that the teachings of the life of Amos Lawrence had been more pernicious than any one could describe, and was ready to endorse all that has been said by the chairman. Taking advantage of the suggestion, which Mr. Quincy threw out at the close of his brief remarks, that the discussion might include all the means and appliances of improved farming, Mr. French commended a more general attention to draining; the establishment of agricultural educational institutions; the institution of such experiments in such culture as were simple in themselves, and within the means of every farmer to follow; and above all, the careful training of young men to the profession of agriculture on the basis of a love for it. He was glad to note that much progress had been made of late; and took occasion to pay a well-deserved compliment to the public spirit of Hon. Josiah Quincy, Sen., who had done more to improve the science of farming in this region than any other man.

Mr. W. J. Buckminster was of opinon that if the young men who were wild after foreign speculation could be advised to turn their energies towards the cultivation of the soil, respectability, comfort, health and usefulness would be more certain than in any other path they could follow. He held that the system of town farmers' clubs, with fairs and exhibitions of agricultural implements and produce, which would furnish attractive features, would do much for the extension of a love for farming, and to show the proof of its profitableness. He was not entirely in favor of agricultural colleges; as practical instruction, with a modicum of book-learning intermingled, would be much more beneficial, in his estimation. One great cause of an aversion to farming was the severity of the labor, and the general irregularity of the working hours. By the introduction of machine labor the hours of labor might be much shortened, and time given for such recreation as a healthy mind could relish and pursue; and, moreover, by breaking up the slavery and monotony of the farmer's life, young women would be induced to marry farmers, and the business of farming be placed on a more pleasing and permanent basis. Some might smile at this talk about marriage; but those who knew the facts would be ready to acknowledge that young women had little encouragement to become farmers' wives, on account of the hard and weary labor they would be bound to do in the household and in the dairy. Whatever frightened the women away from it was not well calculated to induce young men to attach themselves to it. Mr. B. concluded by recommending that, after making the farmer's vocation attractive, it would be excellent policy to induce the young to

engage in its associate details at the earliest possible age; and that every encouragement should be given to the improvement of agricultural machinery.

Mr. WETHERELL, in consideration that the lands in the State did not furnish half the quantity of the produce they might be made to do, thought that one of the best things to go about, would be to elicit by what means this could be cured. Lands under cultivation were fast wearing out; and how they could be renovated was *the* question paramount in interest to all others. Farmers ought not to be content with 10 to 15 bushels of grain, when they could, by improved culture, produce, with no more labor, 40 to 60 bushels. Education was the best means to produce this improvement; and that improvement which was so desirable, would never be found effectual until some means were extant among us for learning the art of approved modern farming—some means which would, in their dispensation, have some sympathy with the objects they sought to attain, and which would thoroughly combine theory with practice. Mr. Wetherell concluded by highly recommending the establishment of Farmers' Clubs in every town in the State, and cited examples of their exceeding usefulness, as it showed itself to his experience. He was thoroughly confirmed in the necessity and importance of carrying out this.

Gov. BANKS simply said that it was his opinion that the primary requisite was to show young men that it was good for them to become farmers, and that the vocation of a farmer was a highly honorable one, and equal or superior in status to any other profession. The great present objection to the business was the necessity for severe labor, and the absence of social amusements. As a question of profit it was not equal to other professions, nor was the political status of farmers what it ought to be; but change these disadvantages—and they could be changed—and both would be enhanced to a covetable degree, and the farmer's craft would be preferred to any other.

Mr. SHELDON, of Wilmington, said that farming had been very profitable to all who had tried it in earnest. He had some idea that more attention should be paid to hay, in curing, as it was the most important crop, and therefore an element in the general list of matters which had a serious bearing in the agricultural prosperity of the commonwealth. Whatever tended to produce certain knowledge of a better system in curing hay in foul weather would be found to be of the utmost consequence. Men might laugh at the idea; but if a similar system to that followed in drying hops was introduced, it could be done with profit. It would not be a great cost to try it; and its importance could be in some measure prized, when it was known that weeks of bad weather followed each other in haying time. So far as Mr. S. could estimate, $2 per ton would cover the expense of drying in this way.

The PRESIDENT held that the sum and substance of the discussion was, that farming, to be popular, ought to be shown to be profitable.

Before the discussion commenced, a very valuable conversational debate took place on the subjects of draining, irrigation, soiling of cattle, &c., &c., among the gentlemen present.

This meeting, of which the above furnishes a sketch of the proceedings, was the last during the present legislative session.

It is probable that a series of meetings will be held during the summer, at which the principal agricultural questions will be lectured on and discussed by competent parties, designated for the duty. An idea prevails that May will be the best time, and that the State House the best place, for holding the proposed meeting or convention.

Reviewing the past series of meetings, they have proved themselves unusually interesting, and in some respects, very profitable. Doubtless some rather strange theories have been advanced, and some rather loose facts have been stated; but these were merely incidental, and in no material measure have militated against the stamina which the general information given at the meetings emphatically had.

For the New England Farmer.

THE ONION MAGGOT.

MR. EDITOR:—I am truly gratified that your intelligent correspondent from Hollis, N. H., has found a specific remedy against the ravages of the onion maggot. This is what has been sought by cultivators here but as yet they had no suspicions it would so readily be found, and least of all in the fertilizer itself, many tons of which have been used on these onion fields.

If I rightly understand Mr. Emerson, this curative against the ravages of the maggot, is to be found in the free application of pulverized guano, to the young plant, just after it starts into being. Now according to my observation, this maggot comes into being, and operates in this wise. The little light colored fly which springs from the maggot, hovers about the plant, and lays its eggs near the bulb, just where the top starts from the ground, and when these eggs warm into life, the insects busy themselves in the bulb, and make it their abode. I have seen a spoonful of maggots squeezed from a single onion. Had not Mr. E. asserted the contrary, I should have had no doubt, that the maggot itself might have been preserved in guano, as well as in pulverized earth or plaster. I have no belief, that its sensibilities are so acute, as to be overpowered by the guano. But if it is a specific remedy, I am glad to know it.

There are many cultivators in this town, who

would agree to pay a guarantee of $25 an acre, to have it made certain that the maggot can be destroyed by the application of guano, after it has began to operate upon the young plant. Many acres were omitted to be sown the last season, through fear of this destroyer, and many more would be sown the present, were it not for this apprehension. J. W. P.

South Danvers, 1859.

TIME OF PRUNING APPLE TREES.

We are always obliged to exercise considerable care that our columns shall not be too much occupied with discussions upon a single topic. The article lately presented by us upon the subject of pruning, has awakened considerable interest in the matter, and the importance of the subject demands it. We have received several letters from high authorities confirming our views, and two dissenting from them. One of the latter is from Mr. DANIEL LELAND, of East Hollistor, who says he has an experience in the subject dating back to 1805. He thinks the true time for pruning "is just before the opening of the buds," and his reasons are,

"*First*, The wound will heal as well as it will when pruned in the middle of June.

Secondly, The sap is saved, that is, taken up in the formation of the leaves."

We will not reiterate arguments to show that he is mistaken, but will merely remark in relation to his first reason, that he must be so, because his theory is contrary to the nature and habit of the tree; the sap flows freely in the spring, but not at all, or very lightly, in June.

His second reason is, that we "save the sap that is taken up in the formation of the leaves." But we do not wish to save it; we often prune because there *is an excess of limbs and leaves*; they are in the way of each other, and prevent a free and healthy growth. But this is not always the case.

Pruning is scarcely necessary at all—unless in cases of accident—when proper care is taken of the young tree. It may all be done with a common pen-knife, if it is always done at the right time.

For the New England Farmer.

COAL ASHES AS A MANURE.

An article with the above heading appeared in the last *Farmer*, in which the writer, copying from an English work, on the benefit resulting from the use of this article in England, closes with the following. "As coal is employed for fuel in nearly every town, experiments on various soils and crops might be made by every farmer at a small expense." This writer, it would seem, is not aware, that the ashes used in England, comes from bituminous, and not anthracite coal. I apprehend there may be found a great difference in the fertilizing properties of these. This want of definiteness, reminds us of the use of lime for the apple tree. Mr. Pell, the successful grower of this fruit in New York State, recommends the use of shell, (not stone,) lime, for this purpose; still many careless writers recommend simply lime; the natural inference is, that they mean common stone lime. There is a difference in the article of lime; most stone lime contains magnesia, a substance which is considered deleterious to the soil, while shell lime is destitute of this. I have generally considered that nearly all the virtue there is in anthracite coal ashes in its application to land, is in the ashes combined with it, which comes from the bark, wood or charcoal used to ignite it. J. M. I.

REMARKS.—There is about two per cent. of potash in coal ashes. But its alkaline is not its only good quality. It has a mechanical effect, and perhaps has still other qualities to recommend it.

For the New England Farmer.

FRUITLESS TREES—MORE LIGHT WANTED.

What kinds of fertilizers are best for apple trees, to make them produce fruit? I have the Baldwin trees, and practice digging about them in the spring, and putting in stable manure, and air-slaked lime occasionally. They grow an abundance of wood, but very little fruit. Some of them have blossomed full, but it was all show, and no fruit. This is the case generally in this vicinity. So that people have come to consider the apple tree an encumberer of the ground, and almost ready to wish them the same fate, of a certain fig tree of olden times.

What is best to put around pear trees, to make them bear fruit? I have put manure, lime, ashes and iron, about them; they grow the wood rapidly, but not the *pear*. One tree, a Flemish Beauty, made an attempt, last season, to produce a specimen of its kind; but before August was out, the whole concern burst up, and proved a failure. The Flemish Beauty has been a favorite pear with us, but of late years, it has taken to cracking badly, and has lost its reputation. This cracking takes place long before the pear matures. Can this be prevented? Will you or any of your numerous readers, give the desired information upon these matters? A. PHILBROOK.

East Saugus, March, 1859.

REMARKS.—These questions, and a hundred others put to us, show how much we need a more intimate knowledge of the business in which we are engaged; and we feel that want, impressively, quite often, when called upon to reply to them.

Why is it, that apple and pear trees that are well cared for fail to produce fruit, in one location, while others near by bear abundantly? Who can tell? Who can penetrate the mysteries of this single point, or fathom a thousand others that meet us at every step? We may now and then stumble upon some fact of importance to our Art, but must depend upon persis-

tent, scientific investigation, for most of the knowledge that will enable us to make progress in it.

There are so many things to be considered that we doubt whether we can be of any service to our correspondent. His trees make wood rapidly, but will not produce fruit. Is the land too rich? Would laying it to grass and taking two or three crops from it bring the desired result? Or cropping it one year with wheat or oats? And so of the pear trees, who can tell us where the trouble lies?

Some of the wise ones say that *root pruning*, that is cutting off a portion of the roots, will bring the pear trees to bearing. The process is to scrape away the earth, and with a sharp tool cut off one or two of the leading roots.

EXTRACTS AND REPLIES.

PREMIUMS ON FOREST TREES.

I see by some of the papers that the Massachusetts Agricultural Society have offered a premium of $1000 for a plantation of white oak trees. Are we to infer from this that all our other kinds of oak are not valuable? It occurred to me that it might be as well to test the growing qualities of all our common kinds. If I lived in Massachusetts, I would enter the lists for the premium. B. F. CUTTER.

Pelham, N. H., 1859.

REMARKS.—If friend CUTTER will look at the *Farmer* carefully, he will see that, with their usual liberal encouragement to agriculture, the Massachusetts Society has offered a premium of $1000 "for the best plantation of trees of any kind commonly used for, and adapted to, shipbuilding, grown from seed planted for the purpose." But there must be one white oak at least to every twenty square yards.

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HAY CAPS.

Which is the best kind of cotton for hay caps, the light or heavy; and what kind of a preparation can be applied to them to prevent grasshoppers from eating them, and make them waterproof? ADDISON COUNTY, VERMONT.

March, 1859.

REMARKS.—Such cotton cloth as may be purchased for nine cents a yard will make excellent water-proof hay-caps, without any preparation of oil or paint of any kind. Caps made of such cloth, and properly placed on the cock, will keep it dry during a storm of three days. If you cut a ton and a half of hay to the acre, we do not think the grasshoppers will eat your caps!

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BLIGHT IN GRAPES—HARTFORD AND CONCORD GRAPES—PLANTS IN ROOMS.

Last year my Isabella grape vine, (when the grapes were about the size of peas,) blighted badly. The leaves and fruit withered and fell off from a portion of the vine, while a part remained thrifty and fruit ripened finely. Will you tell me the cause and remedy?

What is the best grape to raise for family use—what about the Hartford and Concord?

Is it well to have plants in sleeping-rooms, and rooms of the sick? OLD SUBSCRIBER.

Taunton, 1859.

REMARKS.—We cannot tell you the cause or remedy of the blight you speak of.

The Concord is a large, dark purple grape, earlier than the Isabella, and hardy and prolific. Ripens in September. The Hartford we have not cultivated, but it is represented to be prolific, is large, ripens easily, never mildews, and is fit to eat early in September. We cannot say which is *the best* grape for family use.

A few plants in any well-ventilated room are healthy both for body and mind.

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BLIND STAGGERS—SHADE TREES—CORN—PUMPKINS.

What is the surest and least barbarous cure for "blind staggers" in horses?

What season is most preferable for transplanting shade trees, especially evergreens?

Will King Philip or Brown corn do well on the northerly intervales of the Connecticut? What is the average product, per acre, and where, and at what cost can it be procured?

What is the best variety of pumpkins? Mine have all run to vines. FARMER.

Vermont, March 21, 1859.

REMARKS.—To cure blind staggers in horses, you must always feed well and treat kindly, and be especially careful that the horse shall not be overloaded, made to pull hard suddenly, and not driven rapidly when first taken from feeding. Then administer to him three drops of the tincture of stramonium, every third day for nine days, immediately after a fit.

Plant shade trees the last of April or first of May.

King Philip corn will do well on the lands you speak of, if you manure in the hill with some fertilizer that will give it an early start. Sixty bushels to the acre is a good crop—we do not know what the average is. Sold at the seed stores for about $2 a bushel. We cannot shed any light on the pumpkin question.

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TICKS ON SHEEP.

Is there anything that can be fed to sheep that will kill the ticks on them? C. N. ANDREWS.

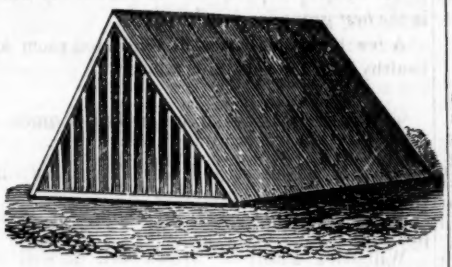
Chelsea, Vt., 1859.

REMARKS.—Give each sheep a tea spoonful of sulphur in some corn meal, every other day, three or four times.

If this does not kill them, a *careful application* of the mercurial ointment will accomplish it.

A CONVENIENT CHICKEN COOP.

Almost every body now-a-days raises poultry —not so much, perhaps, for the profit which it affords, as for the pleasant associations connected with it, their cheerful morning notes, and the happy influences which they have upon children. But where *profit* can be added to other inducements, the pleasure of course is enhanced. This depends, like almost every thing else, upon the manner in which it is done. If a few fowls are kept, and kept well, provided with all the conveniences needed, there will be a profit. One of the important items is to provide a comfortable, airy place for the hen and her young family, and that may be found in a coop which this engraving illustrates. It may be made in a cheap manner, will shed the rain readily, and when open at the ends admits the air freely through it, and a piece of board turned up at the ends at night, excludes all intruders.



Other forms may be used, perhaps as good, but this is a convenient and cheap one. In dry weather it is best to let these coops stand on the ground, but when it is wet, they should be lifted upon boards. Two feet long, or three is better, and about twenty-two inches high in the centre, is a good form. Some persons board up the back-end, leaving a hole for air at the peak. In windy weather, the back end should be closed.

FARMERS' MARKET FAIR.—The farmers of Hampden county will hold a fair at the Hampden Park, in Springfield, on the 13th of April, for the sale, exchange and exhibition of horses, cattle, sheep, swine, poultry, implements and farm produce, either in bulk or by sample.

We think such a fair in the centre of that county might be useful to all concerned, and hope it will receive attention.

A GOOD PERMANENT HOME, AND $40,000!—A writer in another column, on the soiling of cattle, says he knows a man who forty years ago purchased a lot of land, 40 by 160 rods, who "has so managed it as to realize a net income of at least $1000 a year on this farm." Will he tell us briefly how he did it?

THE ONION MAGGOT.

Two years ago I noticed that one-third of my onions were either dead or wilting. On experimenting, I found the maggot was the cause. I applied good guano on the rows, sprinkled on with the hand so as to nearly cover the little onion, or the ground over them. I saw nothing more of the effect of the maggot, and the onions did finely.

Last year I tried the same again, with the same result. I think good guano is a cure for the maggot, notwithstanding your correspondent, "J. W. P.," says there is none. The guano must be good and put on with a liberal hand.

Hollis, March, 1859. ED. EMERSON.

BOYS' DEPARTMENT.

BATTLE BETWEEN THE BOYS AND THE BIRDS.

In one of the interior counties of Illinois, there stands an old school-house, deserted, dilapidated, and pierced on every side with numerous holes —giving sure signs that, in days past and gone, there has been a hard-fought battle of some kind. But who could have selected a school-house for a fortress; or what enemy could have fired so many shots into it in such a peaceful, quiet neighborhood, without being brought before the proper authorities and punished to the full extent of the law? This is the mystery which has fallen to my lot to unravel.

The school-house stands on a ridge of land, surrounded on every side with shade trees, while a few rods in front, runs a small creek, making a most beautiful play-ground for the school. Still farther on is a large field, once covered with thrifty forest trees, but the farmer who owns the field has girdled them all, and now they stretch out their long, skeleton arms, waving, cracking, and breaking with every wind that blows, and falling into the corn growing around them.

These old decaying forests afford homes for large colonies of woodpeckers, who, by habit or instinct, like to burrow in old trees.

Now the woodpecker is decidedly the most military in appearance of any bird flying, and has not only a natural right to be proud of his rich, military dress and splendid appearance, but to drum on these old trees any spring morning, provided, when he gets his forces together, he will let school-houses alone.

Dressed up in a neat little red cap that covers his head and neck, a shining black coat, with white lappel, with a white waistcoat and black pants, he can make as splendid an appearance on a dry limb as any other bird known.

It was a bright, beautiful morning in the year 1856 when the children were assembled at the old school-house, to learn to put four letters together in such a way as to make *baker*, to get their young ideas started in the way to shoot straight. The classes had nearly been through with their morning lesson, the older boys and girls had taken slate and pencil, and were trying to put two and two together so as to make five, and all as busy as they well could be, when tap, tap, whir-r-r-r-r-r-r, went somebody or something on the outside of the school-house. "Boys, be still,

drumming on the school-house !" angrily snapped out the teacher. The boys clapped their hands to their mouths, the little girls smiled and hung down their heads, and quiet was hardly restored, when tap, tap, tap, whir-r-r-*rrrr* went on one side and then on the other side of the house, and it really seemed as if an invading army had made a general attack on the house.

"Really this is too bad," shouted the enraged teacher; "if I can find out who is making this disturbance I will punish him severely."

"Please, then, 'taint nobody but the birds," said a bold little fellow who sat by the window, and knew all about it.

"The birds ! the birds !" said the teacher, as he walked to the door; "I would like to know what business the birds have to come here, and disturb us in this manner ?"

As he reached the outside of the house, some half dozen of the red-capped rascals flew from the house, proving that the little fellow was right, The woodpeckers had actually made an attack on the school-house. "Well, well," said the teacher, "if the birds dont't let us alone, we must punish them, if we can catch them."

Half an hour passed quietly away, and all were so busy with their lessons, that the birds were nearly forgotten, when a general attack was again made by the birds. This could not be tolerated, and three or four of the older boys were sent out, with full license to kill them if they could. But the rascals were too nimble for them. Before the boys could pick up a stick or a stone to throw at them, they would be off and up on a dry limb, peeping out from behind it, winking and shaking their heads at the boys, as much as saying—"Catch a woodpecker asleep, if you can."

Such was the disposition of the birds that it was necessary to keep a watch during school hours to guard the house from their attacks. When school was out for the day, they made a general attack upon it. Affairs continued in this way for some three weeks, when their attacks became so furious that the teacher was forced to dismiss school, and let them have their own way. In a short time the birds had billed some one hundred and fifty holes in the outside covering of the house, and it was nearly ruined. The cause of the attack was easily explained, from the nature and habits of the birds themselves.

The woodpecker, or sap-sucker, as it is sometimes called, is a bird which lives upon the grubs and worms which breed in old and decayed trees and wood. For this purpose he is armed with a long, sharp bill, which he drives into the wood where the wood-worm burrows; and then he uses another weapon, which is a long, sharp tongue, with a barb on the end of it. When he reaches the insect, he thrusts his spear through him, pulls him out, and in this way works for his living.

To enable him to discover his prey, his hearing is so extremely acute that, by hopping up a decayed tree, and laying his ear against it, he hears the worm at work in the tree, bores into it, and pulls him out.

The school-house in question was covered with a kind of half-decayed lumber, taken from the forest at a time favorable to the attacks of these insects. The birds were the first to discover their existence in the house, and consequently made their attacks for that purpose. The results were, the school was broken up, the house nearly ruined, and the birds, for once in their lives, ,came off victorious from the attacks of their common enemy—the school-boys.—*Merry's Museum.*

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

SQUASH CAKES.—Squash left at dinner may be made into griddle-cakes in the following manner: To one tea-cup full of winter squash, put two tea-cups of milk. Stir in flour enough to make a batter of the right thickness for griddle-cakes, and if you like it, a spoonful of Indian meal. Add a little salt, half a teaspoonful of saleratus, and one egg. It is not necessary to observe this rule exactly. Use more eggs, if you choose. The cakes may be made very good without any.

CUSTARDS WITHOUT EGGS.—Boil a quart of milk, except a tea-cup full in which to put four tablespoonsful of flour. When it boils, put in a very little salt, and stir in the flour just as for starch. Add two tablespoonsful of sugar, and such spice as you like. Peach leaves boiled in the milk, or a spoonful of rose-water, are recommended.

LOAF PUDDINGS.—Tie up a pound-loaf of baker's bread in a cloth, and put it into boiling water with considerable salt in it, and boil it an hour and a half. Eat with cold sauce.

CRUMB CAKES.—Keep a bowl or pitcher with some milk in it, and from time to time throw in the crumbs of bread which break off when it is sliced, and also the dry pieces left at the table. When you next want griddle-cakes, take this mixture and break up all the pieces with your hand, add an egg, salt and saleratus, and a few spoonsful of flour. No griddle-cakes can be better.

BOILED BROWN BREAD.—If they are hard crusts, lay them over night in a dish with a little water. In the morning add milk, and boil them. Do it very slowly, and take care that it does not burn. Sprinkle in salt, and just before you take it up, add a little butter. If there is not much milk, take off the lid the latter part of the time. Take up the pieces as whole as you can.

A CHARLOTTE.—Butter a deep dish very thick, cut thin, smooth slices of nice white bread, and line the bottom and sides of the dish, fill it with sliced apples, sprinkling each layer with brown sugar enough to sweeten it, and any spice you may prefer; also a few bits of butter. Have ready some slices of bread to cover the top, soaked a few minutes in milk or water; lay them over, and cover them with a plate that will fit close, and upon that lay a weight. Bake in a moderate heat three hours.

TEA CAKES.—One pound of flour, one pound of sugar, three ounces of butter, one egg, one cup of milk, one teaspoonful of saleratus. Roll them half an inch thick and bake them quick.—*Happy Home.*